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Dec. 13. 1924 .

Dear Mr. Brender -

I should have liked to
have handed you this
book on the occasion
of your stay - But I
fear that it may not
be possible for me
or convenient for you.
And therefore I send it
in advance with the
warm congratulations of
the members of this Society

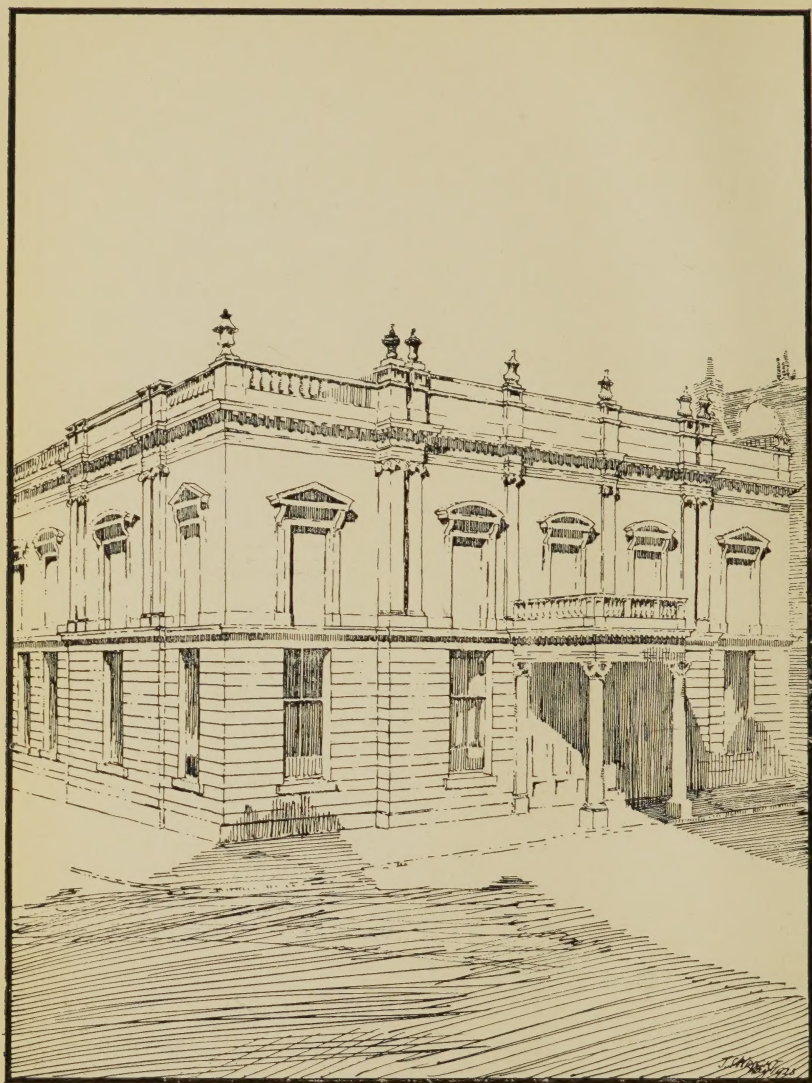
as a record of their
Sincere appreciation
of your work & service
here -

Yours for him
S. Wilson Clark

J. H. Stannard.

G. R. Brench Esq. M.A.
from the members of
the Leeds Philosophical
Society with good wishes
& kind memory of a
long association.

Ernest Clark Hon. Sec.



PHILOSOPHICAL HALL, 1921.

[Frontispiece.]

THE
History of 100 Years of Life
OF THE
Leeds Philosophical
and Literary Society

by

LIEUT.-COL. E. KITSON CLARK,

T.D., M.A., F.S.A.,

M.Inst.C.E., M.Inst.Mech.E.

Honorary Secretary of the Society.



LEEDS:

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1924.

History of 100 Years of Life

and Philosophical

and Literary Society

PREFACE.

After a century's continuous activity and the survival of a century's criticism it is certainly time that the Philosophical and Literary Society of Leeds should have its records arranged and set so that the present and future generations of those interested can see them in one view. It is a pleasure to me to be invited by the President of the Society to contribute a short Preface to these pages. The writer is an old friend of mine and recalls to me the early morning visits he often paid at Adel Rectory, when he rode out on horseback and came round to my study window with his cheery and friendly greeting in the years before August, 1914.

He has chosen the severe but effective method of re-printing selections from the Reports, the annual chronicle of transactions ; and so arranged they convey an accurate impression of what was done, and they conceal, as is proper, the cares and anxieties and trouble which the members of the Council often endured.

The Leeds Society and others of a like kind up and down the country came into existence as descendants of the Royal Society incorporated in 1662 for the promotion of physical science, in which Thomas Kirk of Cookridge took a great interest. At the end of the eighteenth century Dr. Priestley (after the rich antiquarian labours of Ralph Thoresby had been long concluded, but had left a warm glow in the intellectual sky) began to kindle wide-spread interest by his discoveries in relation to oxygen, which soon revealed among the citizens of Leeds enough quiet and responsive minds to start ideas of coming together in social meetings to discuss these and other questions. After one or two trial-balls, as at Newcastle-on-Tyne, the really serious play began with the foundation of the Society whose history is here presented in its own business-like form. In the future the book will be a valuable quarry for some historian of Leeds inquiring for particulars of what interested its chief citizens when they were not following their daily labour in this or that profession or business. He will find here (what he might not have guessed but for the generous public spirit of Colonel Kitson Clark, and his skill in selection of the materials) ample records to prove that through the XIXth Century and well on into the XXth there were in the City plenty of brains, both of men and women, kindled with the love of knowledge for its own sake and ready to hand on the torch to those that come after.

W. H. DRAPER.

Master's House, The Temple,
February 26th, 1924.

Council Meeting, *26th March, 1918.*

On the motion of the Rev. W. H. Draper (ex-President), seconded by the Rev. J. R. Wynne-Edwards it was agreed " That an historic volume of the work of the Society be issued in 1920 on the completion of the 100th year of the Society's existence and that Col. Clark, Hon. Secretary, be asked to write such a volume."

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Photographs by Mr. H. Crowther.

Leeds Philosophical and Literary Society.

A History of One Hundred Years, 1819-1921.

CHAPTER I.

INTRODUCTION.

The Leeds Philosophical and Literary Society has carried on its work for a century. Instituted at a time when England was still shaken by the troubles consequent on the Napoleonic struggle, it reaches its hundredth session in the year after our country and its allies have emerged victorious from a more terrible world-wide war, and are facing similar yet more stupendous problems than those which confronted our predecessors. The parallel can as yet be drawn no further; it would be between hypothesis and fact. Only future events can determine the real similarity between two periods which seem to have so much in common.

During these hundred years the Society has by its lectures reflected the subjects which have interested thoughtful Leeds citizens, it has abundantly maintained the professions of its title, it has faithfully fulfilled those undertakings for which it was designed and so generously equipped by the founders and their successors.

To the energetic manufacturer the arrival of steam was then opening an extraordinary vista of prosperity, to the hand-worker prospects of hopeless dependency. It was the time when the agriculturist reaped large benefits from the soil which he owned; he was reclaiming and enclosing still more acres. The urban population was harassed by the experience of dear food and the fear of greater scarcity. Tiny children were used to tend the machines, the hours were long for all workers, and the conditions were unhealthy. The situation bore in itself the seeds of trouble.

The leaders of the time seem to have held that happiness for the race would arise rather from the general effect of successful commerce, than from the conditions of the individuals who made up the nation, and in industrial centres there was no lack of enterprise and courage.

In the midst of the turmoil caused by political and economic inequalities there were in the country considerable groups of men who had leisure to demand culture and had the means to promote it, men who while they were engaged with the problems of a vigorous practical life, had also the capacity to devote earnest attention to the furtherance of science and letters. Of such were the clergy, doctors, manufacturers, merchants, solicitors and bankers who founded the Leeds Philosophical and Literary Society.

The time had not long been ripe for such a project as the Leeds Directory of 1817, printed by Edward Baines, makes clear in the following paragraphs:—

“With the exception of those arts which have an immediate reference to Commerce and Manufacture,” it states, “Philosophical researches are not much cultivated in Leeds: still less do literary pursuits engage the attention of its inhabitants. An attempt was made in 1783* to establish a Society for the discussion of literary and moral subjects, but after being continued for several years it was entirely given up.

“Two other Societies have since been formed at different periods, the first of which confined its attention solely to philosophical lectures and experiments, while the latter embraced the whole round of philosophy and literature. Both, however, have experienced the same fate with their predecessor.”

But 1819, the year of the initiatory meeting of the present Society, was full of inspiration.

In this year Oersted discovered Electro-Magnetism, De Candolle had just developed his famous Natural Arrangement in Botany, Cuvier his Classification of Animals. Turner and Landseer were at their zenith, in music there was no new masterpiece, but the poetry of Wordsworth, Byron, Shelley, Keats, the history of Hallam, the romances of Scott, the essays of Sydney Smith, Charles Lamb, De Quincey, a recent novel by Jane Austen, were fresh in their readers' hands. Across the light of this splendid performance and brilliant promise struck the sombre shadow of Schopenhauer's denial of all noble ideal, and a small section called Society gave

* A Literary and Philosophical Society was formed in 1783, of which it appears (by a letter addressed to him in that capacity) that Mr. William Hey was the President. The records of its meetings do not descend below the year 1786. Mr. William Hey read a paper “Observations on the Aurora Borealis,” May 7th, 1783, which was sent to the Royal Society early in 1784. From “Life of Hey,” by John Pearson, F.R.S.)

In “Annals of Yorkshire,” compiled by John Mayhall, it is stated that in 1783, the eminent Dr. Joseph Priestley was associated with the activities of this Society. In *Biographia Leodiensis*, it is stated that Mr. William Hey assisted Dr. Priestley in his philosophical pursuits.

itself up to frivolity and indulgence under the unfortunate influence of the "first gentleman of Europe." The intellectual world was stirring with movement and in our nation this West Riding Town of Leeds played no inconsiderable part.

Leeds was then governed by a corporate body, consisting of a Mayor and twelve Aldermen, a Recorder, a Town Clerk, and a Common Council of twenty-four Burgesses, the Mayor being elected by the Aldermen. To-day the Aldermen number seventeen and the Councillors fifty-one.

The Police had lately been reorganised. The Night Watch consisted of thirty-eight men, the Patrol of sixteen, and there were ten Constables. The population was then 62,000, or one policeman to 1,000 inhabitants. The Police in 1920 comprises seven hundred and twenty-one Officers and Constables and one Policewoman. The population at present is 450,000, or one member of the Police to 624 inhabitants.

The Leeds and Liverpool Canal had lately come into full use, and Leeds was within twenty-one hours by coach from London. A steam engine had lately been installed, under the advice of Sir John Rennie, to pump water from the River Aire. The Water-works were then directed by Commissioners elected at the vestry of the Parish Church. Commissioners of the Lamps were also elected at the Parish Church.

Mr. John Blenkinsop's engine, the first commercial steam driven locomotive, had been carrying coal since 1812 from the Middleton Colliery to the town. The designer of this machine, Mr. Matthew Murray—subsequently a Member of our Society—had works in the town at which he produced flax machinery, and devoted his special skill to the designing of mill-gearing. He was one of the greatest of the pioneers in mechanical engineering.

The town possessed woollen and linen manufactures, a flourishing leather trade, iron works, pottery and glass works, in addition the streams worked mills for grinding corn and dye-wood and for crushing rape seed, while several cotton mills were driven by steam engines. The *Leeds Mercury*, established 1720, was published every Saturday morning, the *Leeds Intelligencer*, established 1754, every Monday morning.

The Cattle Market was held in Vicar Lane, the Pig Market in Lowerhead Row, and the Horse Market in Upperhead Row. The Coloured Cloth Market Hall near Park Row, and the White Cloth

Hall in the Calls, were being used by manufacturers. The principal streets were Briggate, Vicar Lane, Kirkgate, Bond Street, Upperhead Row, Lowerhead Row, Commercial Street, Albion Street, Boar Lane and Duncan Street. The general disposition of the town is given in Fowler's plan, dated 1826, facing page 22.

Its rapid expansion is proved by the successive improvement Acts of 1809, 1815, 1818 and 1824 for the making of roads, enclosure of lands, removal of nuisances, supply of water, and lighting by gas.

The site upon which the Society's building was to be placed was in open ground facing Park Row. The district which took its name from the Park was at the western edge of the town, for the Directory of 1817 described Burley as "a very pleasant village two miles from Leeds" and Little Woodhouse as "an ancient village, pleasantly situated on an eminence, about half a mile from the town, where are several gentlemen's houses."

This Park was connected with the Old Manor House* of Leeds, situated near West Bar—at the west end of Boar Lane. The open land extended to Burley Road which was the highway to Bradford, for the Wellington Road did not then exist.

On the eastern edge of the Park some small houses were built and formed the Row, while the first buildings in the fields were probably the Coloured Cloth Hall (1758) and further in the same line the original Infirmary (1771). These latter lay curiously, at an acute angle with Park Row, and probably owed their orientation to the fact that they were placed on a road which took diagonally across the open Park from Lower Briggate to Little Woodhouse. The direction of such a road which is traceable in the west end of Swinegate is lost in Park Square, but again appears in Chorley Lane. See map opposite.

In the Park Row, the Directory of 1817 records Mill Hill Chapel "a Chapel incrusted with grey plaster, and shaded by large trees, which give it a venerable and solemn appearance." The same volume gives as householders in the Row, four merchants, a wool-stapler, a marble mason, a doctor, an upholsterer, seven gentlemen. There were also two ladies' schools. In the Directory of 1826 the houses are numbered up to 34. The larger houses were situated further to the west, Park Square and Park Lane being the more fashionable residential quarter.

* Thoresby Society, Vol. XXIV., p. 399.



PLAN OF LEEDS, 1806.



COURT HOUSE AND PARK ROW, 1823.

CHAPTER II.

FOUNDATION AND FOUNDERS.

Such was the period and such the place which saw the foundation of our Society, and we turn to the circumstances of the Institution, and the personnel of the originators.

On September 26th, 1818 there appeared a letter in the *Leeds Mercury* which was the immediate cause of the founding of this Society. This was attributed by Sir Thomas Wemyss Reid in his "Life of Dr. John Deakin Heaton" (page 97) to Edward Baines, Junior, afterwards Sir Edward, at that time aged 18. By its deliberate style, by its insistence on the quality of respectability, by its interest in the high development of youthful powers, this appeal claims our sympathetic attention in 1920, it proved a summons to action in 1818.

"To the Editor of the *Leeds Mercury*.

Sir, Saturday, September 26th, 1818.

"It has long been the subject of surprise to me," the writer says, "and I believe to many others, that although the town of Leeds is justly celebrated for the number of its benevolent and humane institutions, it can boast of no Society for the promotion of intellectual and literary improvement, nor any which might afford opportunities to our youth for the increase of their knowledge, the display of their talents and the formation of habit as productive of happiness and comfort, as of virtue and honour. There are few large towns where such institutions do not exist or flourish, and they are patronised in many places, much less considerable in extent and much less respectable in the character of the inhabitants, than the town of Leeds. Is our want of them to be attributed to an indifference to their advantages? To the small degree of ability and literary knowledge in our youth? Or in the absence of young men who in a taste for literature, have also the courage and ability to form institutions calculated to promote it in the most eminent degree?"

"I can hardly suppose it possible that any man of reading or sense, can be blind to the beneficial effects of such a society—but if there are any such, allow me, through the medium of your publication, to give a slight sketch of the advantages which would result from it. In the full possession of youthful vigour, and in the unrestrained flow of intellect and imagination, how can a young man be more usefully or honorably employed than in the acquisition of knowledge, which must render him respectable and superior in life, and in the cultivation of those noble powers, which alone exalt man to an infinite height above the brutes, and assimilate

him to the image of his Maker ? An acquaintance with history, with languages, and with literature places him in a higher rank in intellectual life, and with men of talent, than any intrinsic advantages however great, and the pursuit of these studies fills up the leisure hours in the most beneficial way because they improve the mind, quicken the faculties, regulate habits, and restrain youth from those paths into which their strong passions and lively habits would otherwise hurry them. Then admitting the truth of these observations, the only thing to be considered is how most effectually to secure the desired end, and on this I will submit to you my opinion, when I have answered the two other questions I proposed. To the supposition of any deficiency in the reading and abilities of the young men of Leeds, I must say that it is most improbable and, as far as my knowledge extends, false. There are many I know who would grace any literary Society and honour themselves by their productions in it. Give them but an opportunity of displaying their talents, and I will answer for it, the result will show that they were undistinguished because they were unseen.

“ With regard to the third question, I hope I may answer it in the negative, or if at present I am denied that pleasure, that the future exertions of our youth will prove that they are neither deficient in manly courage, nor destitute of ability and genius.

“ In suggesting the model of a Society for the purposes I have mentioned, I will lay down the outline of a plan, by no means to be implicitly followed, but merely as a hint, which will I hope be improved. The name of the Society I consider quite unimportant ; Literary, Debating, Reasoning, Athænæum, or any other expressive of the thing it represents. Its purpose should be the discussion of subjects historical, literary and philosophical. The mode of discussion I should propose to be, by each member of the Society, who chooses, declaring his opinion in a speech, extemporaneous or otherwise, occupying from a quarter-of-an-hour to half-an-hour in the delivery. The person who proposes the subject to open the debate, and to have the privilege of reply, when the decision of the meeting might be obtained by ballot. The meetings to take place once a week, or once a fortnight.

“ With regard to the publicity of the meetings and the admission of auditors, it must be left to the decision of the members themselves ; it is my opinion that publicity would be very beneficial to the Society in every point of view, as being more stimulating to its members, and being calculated to render it more extensively useful.

“ I hope, Sir, and even anticipate that these few observations may prompt the literary young men of this town to come forward and establish a Society of the nature I have described ; and I trust they will make it *respectable* by the abilities and information of its members, admitting no one who is not well qualified for taking an active part in it. The Society, if established, should be conducted with animation and energy : the proceedings should never drop

to prosing, and at the same time should avoid any tincture of arrogance or harshness. With industry, with spirit, and with courtesy, I am confident that an institution might be supported tending much to the improvement and happiness of its members, enhancing their value as members of society, and redounding to the honour of the town of Leeds."

"Allow me, Sir, to subscribe myself,

A well-wisher to my native town, and
your obedient humble servant,

'Leodiensian.'"

On October 17th, 1818, one signing himself Beverlonian states his pleasure in perusing this letter.

He almost blushes to call Leeds a populous and flourishing town when he considers that other places of much smaller magnitude can boast of such Institutions, whilst literary talents in Leeds lie dormant and inactive for want of proper encouragement. "Surely, Sir," he writes, "such a Society might be formed, and I trust upon a respectable footing. Such a Society, well regulated, is calculated to promote the cause of honour and virtue, and to eradicate habits of frivolity and dissipation." He suggests that those who are desirous of becoming its members should address a line to Leodiensian, at the Post Office with their real names, and that he should take the trouble to receive them, and appoint a day when a meeting might be held for the purpose of forming an establishment so instructive and beneficial.

Not long afterwards Leodiensian developed his scheme in a letter to the same paper dated October 24th, 1818.

"Sir,

"When I addressed a few observations to you some weeks ago, concerning the establishment of a Philosophical or Literary Institution in this town, I entertained strong hopes that the materials of public spirit existed in Leeds, which needed only the application of a spark to light them to a flame. Yet, I must confess that I was not without my fears; but my hopes have been more than realised and my fears totally disappointed. The sensation I anxiously looked for is produced; and I am happy to say that the carrying on of the work is in far better hands than mine—in the hands of those whose rank will dignify, and whose talents will uphold the Institution. I am given to understand that several gentlemen of science have long wished to establish a Society for the discussion of subjects connected with Natural Philosophy, and that exertions are now making to carry their designs into immediate execution. A Society for this purpose will be much preferable to one on the plan I originally proposed because it aims much higher, comprehends wider scope, and will introduce persons of every age,

whose science and knowledge will benefit the Institution. It will, of course, need an Apparatus, and will require to be conducted by the delivery of lectures or essays, rather than by debate. There is an institution at Edinburgh of the utmost respectability, which would serve as an excellent model for that proposed in Leeds. Its subjects are generally medical, but it is the manner of conducting it, to which I allude. An essay is delivered by one member at each meeting, and after the conclusion of the essay, the members make what observations they think proper, arising out of the subject, or method of treating it.

"It will be unnecessary for me to point out how peculiarly such an Institution is adapted to a large commercial town, where the manufacturers have so much occasion for a practical knowledge of mechanics and pneumatics; the medical men must understand chemistry and botany; and the private gentlemen should be generally acquainted with the circle of sciences. I am, therefore, glad that these benefits are in a course of being conferred upon the town of Leeds.

"But, although I approve most highly of an Institution for these purposes, I should exceedingly regret if it be confined to these only—if literature occupied no portion of the Society's attention.

"It is a consideration which I cannot lose sight of, and press upon the minds of those who are so laudably active in forming the Institution.

"The introduction of literature would be a relief to the severe and dry study of science which again would be returned to with fresh zest after a literary discussion. By its introduction the Institution would be rendered much more useful, and would possess more general interest. There are many persons whose attainments in letters are considerable, and who yet know little or nothing of Natural Philosophy. These would be introduced by the extension of the objects which the Society is intended to embrace; and if they were excluded, I think much of the interest of the Society would be destroyed. The attention of the members might be equally devoted to literature and natural philosophy, the two subjects alternately occupying the consideration of the meeting. If, however, the latter study preponderates in its interest to a greater part of the Society, two evenings out of three might be dedicated to it, and the remaining evening to the former pursuit.

"The Society at Edinburgh, which I have mentioned above, being one of the most eminent in the Kingdom, its laws may be regarded as of great weight and authority. One of its provisions is that a prize, of a set of books, or five guineas, shall be annually given for the best dissertation on a subject agreed upon by the Society. It will be immediately perceived that such a custom in the Leeds Institution would produce increased effort and beneficial emulation among those who chose to contend, not as being in a pecuniary way stimulating, but as holding forth the gratification

of a higher feeling—the love of honour. It is well for the world, that while one species of ambition—the lust of power—produces the most dreadful ravages on mankind, there is another species—the love of literary fame—which can do good only, and whose greatest exertions produce the noblest effects.

“I ought, Mr. Editor, to apologise to you and your readers for the length of this article, but I hope it will not be found tedious, as it has not been willingly extended, and as my motive in writing it was the furtherance of a design whose completion would be attended with the most beneficial consequences—I think, with Mr. Roscoe, that scientific and literary pursuits are not only consistent with our more serious avocations, but that they have a direct and manifest tendency to promote the welfare and exalt the character of every community into which they have been introduced.

“I am, Sir,

“Your most obedient servant,

“Leodiensian.”

It will be seen that the writer has suggested an arrangement for the proposed Society that places the objects for its institution in the order eventually adopted, and peculiar I believe to the Leeds Body in whose style “Philosophical” is placed before “Literary.” Further, he gives a comprehensive outline of the procedure at the meetings which bore fruit in the early years of its existence. This letter is given without omissions.

The discussion in the newspaper is carried on by Juvenis on October 31st, 1818. He is one of those who most cordially approve of the diffusion of knowledge, yet is not without fears that a Society formed on the principles of Leodiensian would be attended with great difficulties if it did not occasion some mischief. “Where,” he asks, “are we to find members capable of holding debates as proposed—persons sufficiently instructed, and accustomed to public speaking? Is there no danger of faction or contention? In my humble opinion, an Institution formed on the model of the Royal Institution, in London, would be far preferable to the Society proposed by Leodiensian; or if such a Society would require larger funds than this town can command, is there not another way of promoting general knowledge? Lecturers in London may be found, who for a moderate remuneration would visit us for a part of the year. We have an apparatus for showing experiments in all the branches of Natural Philosophy, a collection of monumental curiosities, fossils, etc., for Natural History, and dry and wet preparations for Anatomy.”

“ Provided two or three hundred subscribers of a guinea each, could be obtained, an Institution might be formed more to the taste, and better adapted for the instruction of our young people, than a Debating Society. A rational employment might be afforded for the winter evenings, the money now wasted on folly or vice be directed into a better channel, and the habits of our young persons become solid and respectable.”

On Saturday, November 28th, 1818, Leodiensian defends his own suggestion, after expressing his appreciation of the value of discussion. He says :—

“ According to the system of Juvenis, the Institute would be confined to subjects connected with Natural Philosophy. But my views extended further, and I wished to include general literature. We certainly might procure from London lecturers on the former subjects, but it would be perhaps impossible to find any on the latter. But if we depend upon these means wholly, and trust not at all to our talents and exertions, we should be mere hearers with small comparative interest, whereas on the plan I proposed, we should be speakers and actors, at less expense, and (I think) with much greater improvement. Juvenis fears it would be difficult to find members capable of holding debates as proposed—persons sufficiently instructed and accustomed to public speaking. I do not indeed imagine that the first efforts of the young men in the Society would show any great eloquence or fluency of speaking, but it must be remembered that improvement would be consequent on practice, and that the end of the Society is not the display of talents completely formed, or knowledge already attained, but rather an academy for increasing information and eliciting abilities.

“ The expense of the plan of Juvenis I only just mention, for it must strike everyone and Juvenis himself on reflection, that it would be so enormous as to render the system impracticable. He observes that two or three hundred guineas might be raised by subscription : but on a moderate calculation this would not pay one year’s expenses, if you brought down a respectable lecturer, and it would be difficult to raise the same sum every year. On the other hand, if you buy an apparatus, you have the worth of all you lay out in real property. I think also that the interest felt in the Institution would be more lively, if it were conducted on this principle : and we should be more independent of the assistance of others.

“ I am, Sir,

“ Your most obedient servant,

“ Leodiensian.”

The Council in its report of the session 1822-3 states that the proposal in the letter of September 26th, 1818, was received with approbation by a number of intelligent and public spirited



WILLIAM HEY, F.R.S., 1736-1819.

individuals, and the Transactions of the Society (1837) record that :—

The undertaking was introduced to the public at a meeting held at the Court-House, in Leeds, November 11th, 1818, William Hey, Esq., in the Chair. The following Resolution was unanimously adopted as the basis of the proposed Society, with an obvious view to avoid those points of difference, which it is understood, had caused the dissolution of the earlier Association.

“ At a Meeting of Gentlemen who favour the formation of a Philosophical Institution for Leeds and its Vicinity, held December 11th, 1818, in the Court-House, Leeds :—

“ Mr. Hey in the Chair.

“ It was Resolved unanimously,

“ That this Institution shall be denominated the Philosophical and Literary Society of Leeds, in which subjects shall be discussed, that include all the Branches of Natural Knowledge and Literature (strictly so called), but excluding all topics of Religion, Politics, and Ethics.”

In John Mayhall's “ Annals of Yorkshire,” (Vol. 1., 56 B.C. to 1859 A.D.), we learn that among those present were Mr. John Atkinson (Surgeon), Mr. Edward Baines (Senior), Mr. Edward Baines (Junior), Mr. George Banks, Mr. John Bischoff, Mr. Thomas Blayds, Mr. E. S. George, Mr. Benjamin Gott, Mr. John Gott, Mr. William Hey, Dr. Adam Hunter, Mr. John Marshall, Mr. William Osburn, Dr. John A. Payne, Mr. Michael Thomas Sadler, Mr. C. T. Thackrah, Dr. R. W. D. Thorp, Mr. T. W. Tottie, Mr. William West, Mr. Jonathan Wilks, and before taking up the history of the Society we shall be able by these names and those of some of the original members to appreciate more fully the atmosphere in which the Society began its existence.

FOUNDERS 1818.

JOHN ATKINSON, F.L.S.—1787-1828. (Age 31). Surgeon and founder of the Leeds Lying-in-Hospital, son of the incumbent of St. Paul's, Leeds, and pupil of William Hey. He was a cultivated student of botany, entomology, ornithology and zoology, he contributed articles to scientific journals, and was Honorary Member of the Bristol, York, and Hull Philosophical Societies. He was distinguished by a charm of manner, which attracted recruits to the cause of Science. He served as first Hon. Curator and Librarian.

EDWARD BAINES.—1774-1848. (Age 44). Originally a compositor, he had been since 1801 proprietor of the *Leeds Mercury*. He is said to have done more for the cause of Reform in the County of York than any other man. He followed Macaulay as Member for Leeds, active as an advocate of public economy, an enemy of monopoly, an opponent of civil disqualification of dissenters, and a supporter of the emancipation of slaves. His sympathies were enlisted in all matters that tended to direct the attention of his fellow citizens to the more noble interests, and the letters which preceded the foundation of the Society must have been largely inspired by the encouragement of the proprietor of the newspaper in which they appeared.

EDWARD BAINES, Junior.—1800-1890. (Age 18). Son of the above, succeeded to his father's position and opinions. Under him, the *Leeds Mercury* continued to exercise a powerful influence in the Liberal cause, and its columns provide an interesting and sympathetic record of the work of the Society. Edward Baines, who was present at the initial meeting, lived to preside over the dinner at the 50th Anniversary, as will be noted later in these pages. He was Member of Council and contributed papers on historical and archaeological subjects.

GEORGE BANKS.—One of the first Vice-Presidents. He was Mayor of Leeds in 1818.

JOHN BISCHOFF.—1775-1845. (Age 43). Member of a firm of woollen manufacturers, one of whose brothers took an active part in the campaign against tariffs on raw materials. No communication by him to the Society is recorded.

THOMAS BLAYDS.—1795- . (Age 23). First Treasurer. Partner in the Leeds Bank of Beckett, Blayds & Co. Mayor of Leeds 1827. He read a paper on Icebergs, and in 1824 presented the mummy which is still in the Outer Vestibule of the Philosophical Hall.

EDWARD SANDERSON GEORGE, F.L.S.—1801-1829. (Age 17). Chemical manufacturer, attained a remarkable degree of scholarly knowledge of chemistry without any special tuition. Before he was 20, he was a member of Council, served as one of the Honorary Secretaries, and succeeded his friend John Atkinson as Curator. He contributed papers to the Society on Chemistry and Geology, one of which, on the Yorkshire Coalfield, was printed in the Transactions but is incomplete owing to his untimely death. By his gifts and



BENJAMIN GOTT, 1762-1840.



WILLIAM HEY, JUNIOR, 1771-1844.

his example he bore a large part in initiating the geological and zoological collections of the Museum. The Council has recorded in affectionate terms their sense of loss at his death.

BENJAMIN GOTT.—1762-1840. (Age 56). The son of a Civil Engineer, became senior partner of the great firm of woollen manufacturers and merchants which eventually bore his name. By his energy and large views he reached such a position as to be deemed the head of the woollen manufactory of Yorkshire. He was Mayor of Leeds in 1799, “a firm and enlightened upholder of our constitution in Church and State.” He presided over the public meeting, January 15th, 1819, when the form of the Society was decided upon, he laid the foundation stone and subsequently contributed largely to the successful initiation of the Society, he served on the Council, but does not appear to have read any papers before the members. He collected with Mr. Rawson, the Greek Marbles which form one of the most valuable collections in the Museum. The enterprise of obtaining and transporting these heavy objects is very remarkable. A generous man with wide tastes and interests, his influence may be recognised by the stately eulogy on his memorial in Armley Parish Church.

JOHN GOTT.—Son of Benjamin Gott. 1791-1867. (Age 27). Town Councillor 1815, Alderman 1833, Magistrate and Deputy-Lieutenant of the West Riding.

WILLIAM HEY.—1736-1819. (Age 83). Surgeon. Elected F.R.S., 1775, at the instance of his friend, Dr. Priestley, had been President of a Leeds Philosophical Society which was formed in 1783, of which the two friends were active Members. He was Mayor of the town 1787 and 1802—and was Senior Surgeon of the Leeds Infirmary from 1767 to 1812. He was interested in the development of Methodism, and although a Member of the Church of England, he was the host of Wesley when he came to Leeds. The charm of this distinguished man inspired affection and admiration, and without doubt this charm was largely instrumental in attracting influential men to him. When it was decided to form the present Society, Mr. Hey, although then 83 years of age, presided over the preliminary meeting held on December 11th, 1818.

WILLIAM HEY.—1771-1844. (Age 47). For twenty years surgeon of the Leeds Infirmary, a man universally respected and beloved. He was Mayor of Leeds 1820 and 1831, evidently representing the interests and possessing the high character and ability

of his father. He was the author of medical treatises and was President of the Society 1831-1833. He communicated papers on the Philosophy of Music, Apparitions, Vapours and Imagination.

ADAM HUNTER, M.D.—1794-1843. (Age 24). Physician to the Leeds General Infirmary. Was prominent in the Conservative cause. He lectured on Character, Credulity, Leeds, and the Inhabitants of the Highlands. He was President of the Society 1840-1, 1841-2.

JOHN MARSHALL.—1765-1845. (Age 53). President from 1821 to 1826, was a remarkable man, self-made as far as we know. He acquired a great fortune by the application of machinery to flax spinning. An advanced Liberal and ardent Free Trader, he wrote on "The Economy of Social Life," lectured to the Society on political economy and geology, was one of the Founders of the London University and advocated a University for Leeds. In 1826 he was elected Member of Parliament for Yorkshire.

WILLIAM OSBURN.—1793-1875. (Age 25). Wine and spirit merchant. Was an Egyptologist and Oriental Scholar, and wrote a history of the mummy presented to the Society by Mr. Thomas Blayds. Delivered Lectures before the Society on geographical and other subjects.

JOHN ARDINGTON PAYNE, M.D.—1790-1833. (Age 28). Physician to the Leeds Infirmary and the House of Recovery.

MICHAEL THOMAS SADLER.—1780-1835. (Age 38). A zealous and practical reformer. The inscription on the Memorial to him in Leeds Parish Church states that, "He cultivated with success, amidst the distractions of trade, the elegancies of polite literature and the severer study of political and social economy." He was at this time engaged in a business in Leeds—importing Irish linens. Subsequently, he became Member of Parliament, where he was generally associated with the old constitutional Tories; he will ever be remembered for his advocacy of a limited day for children in factories. He was a Fellow of the Royal Society, and a member of the original Council of the Philosophical Society, President 1828-9 and 1829-30. He read several papers to the Society on social subjects, on poetry and literature.

CHARLES TURNER THACKRAH.—1795-1833. (Age 23). Appointed Town's Surgeon 1817, he was a profound student of medical subjects, he assisted in the institution of the Leeds School of Medicine and is said to have carried on a private school of Anatomy in Leeds before its formation. He published works of great value. His



JOHN MARSHALL, 1765-1845.



MICHAEL THOMAS SADLER, M.P., F.R.S., 1780-1835.

death at an early age was a great loss to medical science. He was one of the first two Hon. Secretaries and the introductory essay upon the opening of the Society was written and delivered by him April 6th, 1821. (See minutes p. 25).

DR. ROBERT W. DISNEY THORP.—1766-1849. (Age 52). For thirty-three years Physician to the Leeds Infirmary, by his humane and untiring exertions he ensured the establishment of the House of Recovery in Leeds, being among the first to recognise the dangers of contagion in the crowded dwellings of the poor. Mayor of Leeds 1830.

THOMAS WILLIAM TOTTIE.—1773-1860. (Age 45). An eminent Solicitor, held a noteworthy position as a leader of the Whig Party, and as a public spirited citizen ; he was a man of commanding appearance and distinguished by the courteous bearing of the old school. A Unitarian at this time and for many years afterwards he supported the Reform Bill, but did not accept the subsequent more advanced propositions of the party. In 1837 he was Mayor of Leeds. In the Society he was Vice-President in 1822. Though noted as a good speaker and writer he does not appear to have contributed a lecture to the Society.

WILLIAM WEST, F.R.S.—1793-1851. (Age 25). A member of the Society of Friends, gained eminence by his distinguished attainments in chemical science, served as Town Councillor for the Hunslet Ward, took an active part in the Anti-Slavery Society and in the Peace Congress. He read many papers before the Philosophical Society on chemical subjects, one of which "On Varieties of Water" was printed in the Transactions. He also lectured on Gibbon, and the Intellectual capacity of the Negro. President 1850-1, 1851-2.

JONATHAN WILKS.—Merchant, presided at the first meeting of the first session, April, 1821. A Town Councillor in 1808.

The above names are those given of the initiators of the scheme. The table which follows gives the list of the Leeds citizens to whom we owe the actual institution, and it is considered that at the Centenary of the Society we do well to record thus our gratitude to the men who had the courage to make use of their cultivation, the force to devise the method, and the generosity to endow the Society. This list of the first members shows that the original promoters were reinforced by men whose names are borne by many who are still active in the interests of Leeds. They require no

comment. But attention may be called to James Fenton and Matthew Murray, the latter of whom, being associated with the former in an engineering and machine-making factory in Holbeck, was only second to Watt in his inventions. To Murray are due the D Slide Valve, the Horizontal Steam Cylinder, the Details of the first Commercial Locomotive of the world, Heckling Machines for flax. It is to be regretted that no communications were given to the Society by these notable citizens.

Among others may be noted C. H. SCHWANFELDER, a talented animal and landscape painter.

REV. GEORGE WALKER.—1793-1830. (Age 25). Fellow of Trinity College, Cambridge, Head Master of the Leeds Grammar School.

JAMES WILLIAMSON, M.D.—1797-1845. (Age 21). Mayor of Leeds, 1837. Whig and Nonconformist. A frequent lecturer.

WILLIAM LUPTON.—1777-1828. (Age 41). Cloth Merchant, whose father had instituted the business which is still one of the most important in Leeds, whose grandsons and great grand-children were Members of the Society at the Centenary and are among the most prominent and distinguished of Leeds Citizens.

REV. RICHARD WINTER HAMILTON.—1794-1848. (Age 24). LL.D. of Glasgow, D.D. of New York, Minister of Belgrave Independent Chapel, author of many works, showing power, research and great fluency—he lectured to the Society on many interesting subjects and was President in 1837-8, 1838-9, 1839-40.

Men whose ages varied from 82 to 17, Whigs and Tories, Churchmen and Non-Conformists, merchants and manufacturers, a leading lawyer, an artist, and many distinguished members of the medical profession, such were the public spirited citizens who united in the common cause of Philosophy and Literature “at a highly respectable meeting held in the Court House” at Leeds, on December 11th, 1818. There is in the letter which inspired the first meeting a stately and rather long-winded severity, and the epithet “respectable” which will have been noted more than once in this record repeats the formula of approbation so constant in the contemporary writing of Jane Austen.

At a time when outdoor sports were not available for the active men of the town, when organised games did not exist, the Society entered upon the work of encouraging both young and old to develop interests beyond their daily avocations.

In the first number of the first volume of the *Leeds Literary Observer*, January, 1819, 'Benevolus' writes a warm appreciation of the objects and the promoters of the proposed Literary and Philosophical Society, he calls upon all subsidiary associations, which had long been in existence in Leeds to continue their services in the Republic of Letters, and thus be a sort of feeders to the Society in chief. "The medical gentlemen of Leeds had indeed procured a supply of good water for the town. The Ministers of religion deserved a higher praise. They had instituted small societies of the kind noted above, and the members of these are expected to bear their part in the new and more catholic institution, without cringing servility to superior rank and fortune, or undue deference to those of superior information."

This Magazine was printed by and for James Nichols, Briggate, as an experiment to produce a small periodical publication devoted almost exclusively to literary subjects. The first number is dated January, 1819, the last in August of the same year.

In 1829 there appeared the *Leeds Monthly Magazine*, the primary object of whose Editor was to diffuse a more active literary spirit among the inhabitants of Leeds. Its first number appeared in March; its tenth, and last, in December. It lacked little in vigour and versatility. At one time it tilts against the Leeds Subscription Library. At another it holds that the plan of educating the working classes by Mechanics' Institutes had failed. It attacks with lively enjoyment the Philosophical Society.

As to "the empty verbosity which distinguishes its meetings, and the perfect uselessness of all its proceedings, we should be afraid," it declares, "of increasing the evil by bungling interference in attempting a remedy. In this spirit we refrain from noticing the plagiarised papers which are weekly read before it; the pure, unadulterated nonsense which floats through the leaden atmosphere of its hall from the mouths of its dilettanti members, who weekly hold forth to the great delight of their admiring mothers, sisters, and cousins, on Mr. Blayd's mummy and other equally recondite and interesting topics; the total want of literary taste or general information conspicuous in all its deliberations. And we dare not, by any means, presume to ask what this Society has done for the literary and scientific character of the town—what transactions it has published—what discoveries it has elicited—what rising talent it has encouraged—or into what quarters of the world its name and fame have gone forth? All these questions would be equally impertinent and unnecessary; besides we should be afraid of bringing down the heavy hammer of the President's grandiloquent

periods on our guilty heads. We will not meddle so far as to praise its Museum, because we believe it to have been formed far more from motives of vanity than from a real love of science."

In the issue of the succeeding month the Editor turns as lightly to apology.

"The publisher of this Magazine has to lament that, during his absence in London, some offensive personal remarks have found their way into its pages. On his return, and before any observations had been made by his subscribers, he had seen and condemned them; for, although he has thought it his duty to make the *Leeds Magazine* a vehicle for legitimate and fair criticism, it was ever far from his intention to wound individual feelings, or turn into ridicule the laudable attempts of talented men to raise their native town to that degree of eminence in literature and the arts, which it has a just right to claim, with other populous towns in the kingdom."

And talented men they were, serious too and even complacent, and when in our Dickens of a few years later we read "A Full Report on Everything,"* and the doings of certain savants, in the *Pickwick Papers*, we may perhaps respectfully recognise from this History some little cause for a contemporary kindly philistinism.

The momentous events in the life of the nation during the century, the striking changes in the population, geography, and the general facilities of Leeds, have in due course affected the environment and modified the functions of our Society. It is with some diffidence, therefore, some fear of undetected inaccuracies, and a sense of incompleteness that the writer endeavours to present the correspondence of the circumstances of the Society with national and local events.

In order to furnish a general view of the subject a chronological table of local and other events is set out with the names of the principal officers included, pp. 218-232. A list of all the lectures appears on pp. 151-217, and a curve of membership marked with the variation of the types of membership is placed on p. 233.

It may not be too fanciful to describe these records as the three dimensions which define the structure. As a complement to this will be found a record of the distinguished men who have accepted the invitation to become honorary members.

*Bentley's Miscellany, 1837, p. 397.

One further remark may precede the record of the work of the Society. At the first meeting and in the contributions before the members a very prominent part is played by Surgeons and Physicians, indeed Sir Wemyss Reid in his life of Dr. Heaton alluded to the prevalence of an idea that the office of President was reserved for Doctors or Clergymen. This is at once a witness to the enlightened cultivation of such members, and doubtless a testimony to the personal influence of the beloved and great man, William Hey, illustrious doyen of his profession.

CHAPTER III. ESTABLISHMENT.

The initial decision to purchase land and erect a building was made at a General Meeting at the Court House, May 7th, 1819, and a Building Committee of 17 Members was formed to effect the purchase and erect a building. Mr. Wilks was appointed Secretary and Mr. Thomas Blayds, Treasurer.

Subscriptions amounting to £3,500 (representing 35 £100 shares) were guaranteed and were all called up by November 3rd. This sum was supplemented later by new subscriptions which reached £2,600.

A class of Ordinary Members was also instituted who made a deposit of £3 3s. 0d. and subscribed annually £2 2s. 0d. Of these there were at first 77 (Subscription Bank Book).

The records of the Building Committee are entered in a special book which opens with the conditions and restrictions for the elevation of buildings in front of Park Row, which were to be observed by purchasers of land in the estate of Messrs. Thompson and Makins at Leeds.

The purchaser is to bear half the expense of the common sewer in the road, he must fence off his lot, pave half the road, and lay a causeway in flags six feet broad. The buildings are to be in line, fronted with dressed brick or stone.

May 14th, 1819. Mr. Richard Dennis Chantrell was appointed architect.

June 4th.—Mr. John Cawood's estimate for masonry was accepted, that of Messrs. Swift, Almen and Dunn for digging for the foundations.

June 11th.—Messrs. Kershaw and Briggs contracted for the brickwork.

June 2nd.—Mr. Michael Webster for the woodwork.

July 9th.—The corner stone was laid by Mr. Benjamin Gott, and the following coins were let in :—

A Gold Sovereign	..	..	..	..	A.D. 1817
A Silver Crown Piece..	..	..	..	..	A.D. 1818
A Copper Medal of His Majesty George III.					A.D. 1817
A Copper Medal of the Prince Regent	..				A.D. 1814

An agreement had been made with Messrs. Thompson and Makin to purchase from them a site consisting of 40 yards on Park Row and 20 yards in depth for 20s. per square yard.

July 23rd, 1819.

The purchase price was increased to £825, as the vendors contended that the ground purchased should be measured to the then existing pavement, thus including a further 55 yards. The vendors also agreed to subscribe £100 each.

August 30th, 1819.

The transaction was completed by the requisite payment to the vendors.

September 20th, 1819.

When the Committee met it was decided that the North East Wing should be raised of stone instead of brick at an enhanced cost of £75.

November 8th, 1819.

The plastering was let to John Maggett and Sons.

February 2nd, 1820 and March 24th, 1820.

On these dates the materials and designs of the various mantelpieces occupied the exclusive attention of the Committee, and on

June 9th, 1820,

The Treasurer was directed to pay £2 5s. 0d. for the coins and medals deposited on the previous July 9th under the Corner Stone.

June 17th, 1820.

The minute is as follows :—

“The Building Committee met this day in the Court House at 11 o'clock a.m. Present—Dr. Hunter and Mr. Blayds. After remaining half an hour Mr. Blayds left. Towards the conclusion of the Meeting it was proposed by Dr. Hunter, seconded by himself, and after a warm debate unanimously agreed to “That each Member of the Building Committee and Council be in future fined one shilling for non-attendance. Agreed that the same do pass into a Law, and ordered by the President to be minuted in the Committee Book.”

(Signed) A. HUNTER.

N.B.—The President was at the time Mr. John Marshall.

June 29th, 1820.

Eight members assembled, and the woodwork used in the floor of the library room was condemned. An estimate of a deficiency of £1,100 was considered.

July 14th, 1820.

The need for funds was placed at £1,200 and subscriptions to meet this amount were obtained. Five shares of £100 being taken up both by Mr. Benjamin Gott and Mr. John Marshall.

The woodwork continued to cause anxiety to the Committee, and was the subject of a dispute between the architect and the carpenter. As a result a substitution was made. The offending beams were trussed and tested with a load of 5 or 6 tons.

March 15th, 1822.

A Meeting of the Committee was holden in the Society's Hall.*

A schedule of the building accounts, as delivered by the Architect, showed a total of £6,150 10s. 3d. from which a charge of £19 5s. 0d. by the Architect was rejected as being beyond the 100 guineas agreed upon for his services.

December 6th, 1822.

The workmen's bills were ordered to be paid and on the 6th December the Committee were instructed to take steps towards letting the cellars.

The original building was a quiet dignified example of the Neo-Grec style which became so fashionable in the early years of the 19th century. The design of the Bank of England in London may have had some influence on the architect, R. D. Chantrell, who served his articles, 1807-1814, with Sir John Soane, the architect to the Bank of England. The Soane Museum in Lincoln's Inn Fields was the office and dwelling-house of Soane and his pupils, and remains as it was in Soane's time. In the Philosophical Society's building the central portion of the faces on the streets were emphasised by projections. That in Bond Street included the width of three windows, and the entrance doorway. According to the plans the glazed windows of the ground floor had rounded heads, the windows of the first floor square heads. Unfortunately the refined mouldings which were used by the Greeks on their marble temples in the dazzling sunshine, picked out as well with scarlet and blue, were unsuitable for the grey skies and soot-absorbing stone of Leeds. It remains, however, after its enlargement, eminently a sensible building which expresses its purpose.

The 1862 alterations were carried out with considerable skill, though it is questionable whether the vases on the parapet can be considered an improvement on the original design.

At this time the entrance was transferred to the front in Park Row and a porch erected over it which spanned the causeway, while the Bond Street frontage was doubled, the central feature of the first building being repeated.

*It is worthy of note that 1822 was the year in which the Newcastle Literary and Philosophical Society first erected for itself a permanent home.



PHILOSOPHICAL HALL, 1821.



PLAN OF TOWN OF LEEDS.

By Charles Fowler, 1826.

(No. 47, Philosophical Hall).

The windows were provided with the square heads which now exist, and the upper windows were built up, the light for the upper floor being provided from double glass roofs.

The internal arrangements of the second building are clear from the drawings reproduced p. 73. The room which had been used for lectures, and was on the east side, became the Large Vestibule ; and the lecture theatre, a fine room, was added, in the centre of the ceiling of which was a top light This appears in the drawing. In order to provide accommodation for the increasing collections, the open space was subsequently filled in, but later signs of weakness appeared in this floor which caused great apprehension and in consequence the two pillars now standing in the lecture room were inserted. See references Years 1820-21, 1861-62, 1865, 1868-69.

CHAPTER IV.

ANNUAL REPORTS, GENERAL MEETINGS, COUNCIL MINUTES AND PROCEEDINGS WITH OCCASIONAL NOTES.

November 5th, 1818.

A General Meeting was held at the Court House at which the first Officers and Council were elected. The composition was as follows :—

<i>President</i>	..	..	..	John Marshall.
<i>Vice-Presidents</i>	..	..	..	George Banks. Jonathan Wilks.
<i>Secretaries</i>	..	..	..	Adam Hunter, M.D. Charles Turner Thackrah.
<i>Treasurer</i>	..	..	..	Thomas Blayds.
<i>Curator and Librarian</i>			..	John Atkinson.

Council.

John Atkinson.	Thomas Motley.
John Bischoff.	John A. Payne, M.D.
Edwin Birchall.	Michael Thomas Sadler.
Joshua Dixon.	John William Tottie.
John Gott.	William West.
William Hey.	William Walker.

November 12th, 1819.

The Members formed a Temporary Association. Meetings were resolved upon for each alternate Friday, discussions to begin at 7 p.m. and to continue no longer than 10 p.m. Names to be called at 7 o'clock and fines of one shilling for absence or late attendance were ordained. Mr. Jonathan Wilks was selected as first President. Discussions were to be inaugurated by each individual member, taken in alphabetical rotation.

November 26th, 1819.

Mr. John Atkinson opened the series on November 26th, 1819, with a paper "The Effects of Spirituous Liquors on the Human Frame."

COUNCIL MINUTES.

January 5th, 1820.

The Minutes of the Council are continuous from the first held on this date when the Laws were considered. The Laws were again under discussion on January 8th and were enacted on January 14th.

On March 30th, 1820, at the Court House it was resolved to send to each member a notice urging him to produce a paper, and to request Mr. John Marshall when in London to procure apparatus. On June 9th the question of papers was again before the Council and it was agreed that preference should be given if courses of lectures were offered.

Between February 14th and March 23rd, 1821.

The hall was examined on a day in March not specified. The Large Room above stairs was selected for the Museum, the Gallery for the Library.

April 4th, 1821.

It was resolved that the Annual Subscription for the present session be demanded.

GENERAL MEETINGS.

A General Meeting of the Society determined that the Council should receive communications from the Members in the form of prize essays, and from these select one to be read at the Opening of the Hall.

October 6th, 1820.

Three papers were presented at a Council Meeting on October 6th, 1820, read October 9th, and circulated among the Members, two days being allowed for reading to each.

February 21st, 1821.

A ballot was held and the essay selected which bore the motto, "*Servare modum, finemque tenere naturamque sequi.*" This was found to have been written by Mr. Charles Turner Thackrah, one of the two first Honorary Secretaries.

April 6th, 1821.

The paper was read at the first General Meeting. A copy is preserved among the books of the Society, and is worthy of the careful perusal of those who desire to understand the serious spirit of the early founders. It is a dignified and inspiring discourse. In sixty pages, each containing about two hundred and seventy-five words, the author develops the effects of the love of knowledge by which he distinguishes man from every other class of the animal kingdom. He congratulates Leeds, opulent and enterprising as it had shewn itself, in at length being sensible of the advantage obtained by the

union of talent and the conversational diffusion of knowledge. To the Society which was to be the instrument of this new attitude he defines the processes by which the necessary "mental excitement" has acquired its energy, as Commerce, Liberty and War. For his examples he employs the histories of Egypt, Greece, Rome and our own Country. He then applies himself to the effect of different subjects upon the individuals and the community. The proper use or the inordinate pursuit of classical studies, the development of philosophy by speculation rather than experiment, the importance of history, and the extreme value of "Natural Knowledge, Mathematics and Mechanical Science"—are all treated in admirable language with discernment and reverence. In Chemistry, Geology, Physiology, Mechanics, he records satisfactory progress, but laments the want of science in Agriculture.

He proceeds to defend Philosophy from the censorious who charge against it the propagation of bad principles and scepticism, or accuse it of producing irritability in its disciples, and points out that in spite of the toil attending the ardent prosecution of Science, many men have combined activity in affairs with original work in literature. He passes to the encouragement of those who might be diffident of their powers, or being mercantile men might be otherwise engrossed, but offers his arguments "to honest and thoughtful characters only." He then regrets that whereas "England is distinguished for Knowledge" and celebrated for its Inventors, the knowledge, activity, and mental energy so noticeable in Leeds have been too exclusively devoted to the acquisition of wealth, and he outlines the duty of the Society to inculcate the faculty of patient thought. He asks that research in every sphere of knowledge should be undertaken with especial reference to Leeds, its commerce, its public work, improvements in the structure of its buildings and streets, and its culture, and he demands the energetic co-operation of the many respectable and intelligent citizens who were not disposed as yet to be efficient members of the Society. The essay ends with a noble exhortation to the audience to cultivate their powers, to devote their activities to the service of their fellow citizens, and "while cultivating Science, to forget not the obligations of social life, nor their duty to God."

For the better understanding of the line adopted by the early Councils an analysis of the subjects of the lectures of the first ten years is subscribed:—

	1819-21	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	Total
Archæology. History.	2	—	—	2	1	3	2	2	6	2	4	24
Literature. Art. Pædogy. Ethics	6	4	4	6	5	10	7	4	3	4	1	54
Science. Chemistry. Geology. Entomology.	10	15	4	1	2	1	3	9	3	3	5	56
Physiology. Biology.	2	2	4	1	2	1	1	—	1	1	3	18
Geography. Travel. Ethnography	1	1	3	3	1	—	1	1	—	—	—	11
Economics. ..	—	1	—	1	2	—	1	—	1	3	2	11
	<u>21</u>	<u>23</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>15</u>	<u>15</u>	<u>16</u>	<u>14</u>	<u>13</u>	<u>15</u>	<u>174</u>

It is to be observed that music and art which curiously do not appear to enter into the scheme of Mr. Thackrah are not forgotten.

At these early General Meetings the order of business was as follows :—

1. Society constituted and Roll called.
2. Minutes of the private business at the last Meeting read.
3. Motions left undecided at the last Meeting determined.
4. Proposals for admission decided.
5. New applications received and motions made.
6. Compositions and subjects of conversation for the next Meeting announced
7. Visitors for the night announced.
8. Adjournment for five minutes.
9. Visitors admitted.
10. Literary and Philosophical compositions read.
11. Literary and Philosophical conversation.
12. Meeting adjourned.

The private business not to continue later than half-past 7 o'clock.

It may be noted that the time of adjournment is recorded on occasions as 10 p.m.

The Annual Reports are continuous from 1820-21 to 1919-20. The first two were not printed, but copies of all those from 1822-23 onward were printed and circulated among the Members.

The Council Minutes begin in 1821.

ANNUAL REPORT.

1820-21.

The first Report was read May 18th, 1821. It was written in the first person by Dr. Hunter, one of the two Secretaries. It alluded to the postponement of the first meeting from the appointed date in November, 1820, owing to the unfinished state of the building. For this the Building Committee is exonerated, the blame being laid upon the imperfection of the joiners' department. The Report contains the following sentence:—

“The original estimate including the land was £4,000, but it will not much surprise those who are practically conversant with the science of architecture when they are informed that this estimate will be exceeded by at least £1,000.”

The deficit was made up by the generosity of two Members, Mr. John Marshall and Mr. Benjamin Gott.

Gifts for the Society are recorded—the first of all being green cloth for the tables by Mr. Benjamin Gott, followed by a copper stile from Mr. George Banks, and plants, birds, quadrupeds, minerals, casts from ancient gems, a cast of a bust of James Watt, books, and an air pump. The Society is congratulated on the cheering aspect of its affairs and members are recommended to commit their stores of knowledge to paper for the benefit of themselves and others.

COUNCIL MINUTES.

April 11th, 1821.

The Hall was first used for a Meeting of Council on April 11th, 1821. Mr. Edward Baines, Editor of the *Leeds Mercury*, was appointed printer until January 1823, after that date Mr. Gawtress (Editor of the *Leeds Intelligencer*), and Mr. Baines, were entrusted with the work for 12 months each alternately. Mr. Gott was thanked for tablecloths, a ballot box was ordered, and Mr. John Atkinson offered his collection of British Birds and Quadrupeds.

The minutes of succeeding meetings continue to record gifts from members by which the collections were steadily augmented.

May 4th and 11th, 1821.

The benevolent intellectual oligarchy which directed the Society's affairs took action in a manner that the modern authorities will admire if they do not imitate. On the former date Dr. Adam Hunter presented a letter from Mr. John Burton, in which he stated that he could not attend on Friday evenings at present, but wished to continue a member and to pay his subscription when he could attend. It was resolved that this indulgence could not be granted,

but Mr. Burton be recommended to transfer his ticket for the present to one of the new members. On the latter date it was resolved that a book be laid in the Strangers' Room on the days of meetings, and that the names of strangers be then taken down and read over by the President before the admission of strangers, and that the list of fines for the session be made out and the Clerk be requested to wait upon the members fined and to collect the same. That the Curator procure a book in which the Laws shall be written for signature by the Members.

Dr. Hunter was requested to draw up a report of the General state of the Society. It is described above.

May 25th, 1821.

On May 25th, it was ordained that a proper person should carry round the Book of the Laws in Manuscript for the members to sign; the subscriptions and fines to be collected at the same time. Subjects of Lectures now become one of the important subjects in the minutes.

June 1st, 1821.

It was resolved that a remuneration should be offered to those members of the Society who delivered public lectures. The price of tickets to the outside public should be 2s. each for subscribers to a course, 2s. 6d. for single lecture tickets, the lecturers to have the price of 25 subscribers' tickets for each lecture, and in addition half the surplus above the 25. £150 to be spent on apparatus for Mr. West's and Mr. George's lectures, £60 for Electric apparatus as recommended by Mr. Atkinson, and £12 for travelling expenses of the Sub-Committee.

The design of Members' tickets was the subject of consideration at more than one meeting.

The Council's hour of meeting was generally at 7 p.m.

June 8th, 1821.

A sum not exceeding £50 was appropriated from the funds of the Society for the commencement of a permanent library, only books of high credit and respectability in Literature and Science were admitted, these to be confined at first to those published in the English language—no book to be rendered inadmissible because it may have been published a long time before.

July 14th, 1821.

Competition with the Society appears on July 14th, 1821.

The following is in the minutes:—

“An advertisement having appeared in the *Leeds Intelligencer* announcing an intended Course of Lectures on Chemistry, proposed That it appears due to the gentleman advertising (Mr. Jno. Murray) to inform him that it has been for some months decided by the Council of this Society to provide a Course of Lectures on the subject at their Hall, by Members of their own body, for which preparations are made and that the Secretaries be directed to inform him accordingly.”

The advertisement appearing in the issue of July 9th, 1821, is as follows :—

“*Experimental and Popular Chemistry.*—Mr. Murray, F.L.S., M.W.S., respectfully announces to the ladies and gentlemen of Leeds that he will give a popular course of twelve lectures on Experimental Chemistry should an adequate number of subscribers be obtained Terms, Gentlemen £1 1s. 0d., Ladies 12s. Tickets transferable. Intending subscribers will please signify to their respective booksellers, as early as convenient. The experiments (upwards of 200) will embrace all that is new and curious in modern discovery. New experimental illustrations of Potassium, Sodium, Sulphate of Carbon, Iodine, etc. The new Galvanic Triads with electro magnetic experiments, oxyhydrogen blowpipe with combustion of the Diamond.”

July 20th, 1821.

The whole correspondence between Mr. John Murray and Dr. Hunter was laid before the Council. Resolved :—

“That Mr. Murray’s letter be considered by this meeting as discreditable to its Author and improperly reflecting on the character of our Society. The Council proceeds to express appreciation of the efforts of Messrs. West and George in preparing their Chemical Lectures and claims the decided support of the Society for them.”

(The lectures were to be advertised). The Council attended this meeting in considerable force and prolonged it to so late an hour that they had to adjourn the consideration of some of the minutes of the previous meeting to a subsequent occasion. From their close attention to the arrangements it can be seen that the Council attached considerable importance to the enterprise. The gross receipts of the lectures are reported later as £52 10s. 0d., from which the attendances of a hundred years ago may be guessed if not calculated.

September 28th, 1821.

The Laws for the regulation of the Library were confirmed. They were simple and severe, and are given below :—

“That the Library be open for the use of the Members every day, Saturdays and Sundays excepted, from 4 in the afternoon to 10 o’clock at night.

That for the present no books be allowed to be taken from the Library under the penalty of Five Shillings, except by an order from the Council in compliance with a written request to that effect.

That every book be replaced in the situation from which it was taken under the penalty of One Shilling."

October 12th, 1821.

It was determined that no person be allowed to see the interior of the Hall, except in the company of a Member, and that the time for this purpose be limited from 10 o'clock till 4 and that this regulation be notified to the Society at the next General Meeting, and that Fees to the Housekeeper be not allowed.

The Leeds Guardian Society was established in 1821. The following prominent members of the Philosophical Society were among those interested :—Edward Baines, Thomas Blayds, William Hey, Robert W. Disney Thorp, Thomas William Tottie.

January 11th, 1822.

The Council decided to ask Mr. Charles Waterton, the celebrated traveller, for a lecture date, and he became subsequently one of the Honorary Members. Mr. Matthew Murray the celebrated engineer is mentioned in these minutes as a possible lecturer without further remark.

January 25th, 1822.

It was resolved that the Chairman at the next General Meeting be requested to notify that any marked expression of public approbation or disapprobation is improper at Meetings of this nature.

May 24th, 1822.

A certain Mr. Makins having requested that the words " Russell Street " might be painted on the Hall, it was unanimously objected to. The Council continued to present a firm face to the outside world.

June 12th, 1822.

A letter from M. Nicomede Albertini, proposing to deliver a course of lectures in Leeds on Pestalozzi's and Felenburg's method of teaching and acquiring languages, and requesting the use of the Hall for that purpose, having been submitted to the Council, it was resolved that the Secretaries should inform M. Albertini that the Session being ended the Council were under the necessity of declining his offer. On the same date the Secretaries were desired to deliver the following notice to Mr. Edward Kenyon Bullman :—

" LEEDS PHILOSOPHICAL HALL.

Complaint having been made to the Council that a Member of

this Society has made use of some of the apparatus without leave from the Council, in conformity to Sec. 40 of the Laws; the Council notify that any repetition of such conduct will be submitted to the Society at the first General Meeting."

The Council adopted Friday as the date of Meeting.

August 2nd, 1822.

On August, 2nd, 1822, the Society applied to the Treasurer for a loan of a sum not exceeding £400 to bear 5% interest in order to discharge the several debts due from the Society.

GENERAL MEETING.

January 4th, 1822.

A paragraph having been communicated to the *Leeds Intelligencer* for its issue of December 10th in which the subject of a paper was mentioned, and the conduct of its author animadverted upon, the writer, who was a Member of the Society, was instructed to write an explanation in a subsequent issue,* and it was resolved that only accounts approved by the Council should be permitted in future. The unauthorised publication of reports was evidently a matter of considerable interest for the subject was again alluded to and provided against on January 21st, 1822.

ANNUAL REPORT.

1821-22.

When the Hall was finished in 1821, the sum expended was £6,150 10s. 3d. This sum exceeded the anticipation, and there was a deficiency of £315 10s. 3d. But it was held that the expenditure on apparatus and furniture would be met when the subscriptions of the succeeding year should have been received. The number of gifts had fortunately become too great for enumeration in the Report, and the importance of the Museum even in its infant state was apparent to all.

ANNUAL REPORT.

1822-23.

The first printed Annual Report of the Council on the general state of the Society is dated 1823, and was printed by Edward Baines. It is prefaced by a quotation from the *Novum Organum Aph.* 3, "*Scientia et potentia humana in idem coincidunt, quia ignoratio causae destituit effectum,*" and its appendix ends with a certain modest satisfaction.

(*This appeared on the 24th and is quoted in full at the Meeting of January 4th, 1822).

The text begins happily with a reference to the removal of previous pecuniary embarrassments and a hope that with the relief from all financial liabilities, the successors of the acting Council will exercise such a vigilant economy as to enable them to make suitable purchases for the Museum and the Library.

The gift by Lord Grantham of a cast of the Sitting Muse, and the contribution of miniature casts of the Elgin Marbles by subscription are mentioned. The papers were attended by numerous and eagerly attentive audiences, and the variety of subjects is cited as a satisfactory realisation of the intentions of the original purpose of the Society. Then follows an exhortation to those members, who, though possessed of literary and scientific attainments, had hitherto refrained from contributions.

The public lectures had excited a lively interest. The Hall had been used for an exposition by Dr. Humphreys from Dublin, of his method of instructing the Deaf and Dumb. Meteorological observations had been maintained for upwards of a year. (These were first recorded in the report of 1853 and the practice has been continuous up to the present date).

The advantages to be derived from an interest in the work of the Society are earnestly advertised, and an estimate of the reputation already attained is found in the pages of the visitors' book, which give the names of 2,000 individuals from every part of the world.

The gifts of books are inconsiderable in comparison with the donations to the Museum, which rival the lecture syllabus in their value, variety and interest.

COUNCIL MINUTES.

January 10th, 1823.

The Secretaries were desired to present Mr. Thackrah's Introductory Discourse to the following Societies. The list forms an interesting record of the institutions deemed to be parallel in interest.

- Linnean Society.
- Wernerian Society.
- Caledonian Society
- Medico-cherurgical Society.
- Medical Society, Edinburgh.
- Cambridge Philosophical Society.
- Manchester Philosophical Society.
- Newcastle Philosophical Society.
- Bristol Society.
- Geological Society, London.
- Academy of Sciences at Philadelphia.

Cornish Geological Society.
Birmingham Society.
Liverpool Philosophical Society.

On March 14th, attention was called to the inconvenience arising from persons entering the Hall late, and a notice was ordered that—No visitor shall be admitted after the public business of the Society has commenced.

ANNUAL REPORT.

1823-24.

The Society is congratulated upon the improved state of its finances. The gift of two Mummies is recorded, and a suggestion is made that members with commercial relations in other countries might supplement the already important collection by interesting additions. At the same time gratitude is expressed to distant correspondents for papers which have contributed to the success of the session. One of the Mummies was opened by the Council in the presence of Mr. Blayds the donor.

The public lectures were of unusual interest, John Dalton, F.R.S., the distinguished discoverer of the atomic theory of chemistry, contributing six on Mechanics and Meteorology. Charles Waterton, the great Yorkshire Traveller and Naturalist, who had already presented a splendid gift of tropical birds, gave an exposition of his special methods of preparing subjects in Natural History. Public anatomical lectures were also delivered, and in all cases the audience is described as “numerous and respectable.” As the lectures were free of expense to the Society, a sum of five guineas per lecture was given to the Infirmary. A series of lectures on Literary subjects is advocated, although “such an undertaking might in some respects be considered an experiment on the taste of the Society which had hitherto tended rather to scientific subjects.”

A design having been set on foot for an institution for instructing mechanics and artisans in the principles of their trade, and the elements of general knowledge, the Council records the lively interest of the Society in its formation and the unanimous decision of a general meeting to lend the Hall to the Mechanics’ Institute when formed, and many Members of the Society took a prominent part in its formation.

A comment is made on the rise of other Philosophical Societies, notably in York, Sheffield, Hull and Whitby, inspired by the example of Leeds, and in view of the addition to the forces making for the co-operation of all classes in the cultivation of knowledge,

the need is urged of keeping a foremost place in the generous rivalry. The lofty ideals and useful purposes of such institutions fill the last pages of a singularly earnest and optimistic Report. During the year the Council gave evidence of their attitude by the loan to the Mechanics' Institute, Leeds, and the York Philosophical Society of the mechanical apparatus on which they set such store.

The Honorary Members are raised from 6 to 11, the Corresponding Members from 2 to 6. Distinguished additions to the former are Sir Humphrey Davy and Mr. John Dalton. The latter was President of the Manchester Literary and Philosophical Society from 1817-1844.*

The accounts are similar in character to those of the preceding session. A new source of revenue had been added. Fines realised the handsome sum of £41 4s. 0d.

COUNCIL MINUTES.

1823.

Steps were initiated for the purchase from Messrs. Making of the ground on the West side of the Hall.

October 16th, 1823.

An application by a Mr. Clark for the Hall for the delivery of three lectures on various subjects of Natural Philosophy was rejected as being incompatible with the interests of the Society, which required a much fuller exposition of the proposed subject than could be possibly comprised in three lectures.

It was resolved that young men not exceeding the age of twenty-one, and resident in Leeds for a limited time as apprentices or clerks, be admitted to the Public business of the General Meetings and to the Public lectures of the Society, by subscribing the sum of two guineas per annum; that they be annually elected by ballot, be exempt from fines for non-attendance, but subject in other respects to the Laws of the Society. That when any clerk or apprentice shall be proposed, the name of the master shall be specified who shall certify his age.

December 27th, 1823.

A claim by the architect for £19 5s. 0d. was rejected, and he was referred to the provisions of the Laws in view of his own arrears of subscriptions and fines. It was resolved that, in the discussions after papers, no member, other than the writer, shall speak more than three times without permission of the Chairman.

*See "A Century of Science in Manchester,"—the Hundredth Year of the Literary and Philosophical Society of Manchester (1881), by R. Angus Smith, F.R.S., Ph.D., LL.D.

ANNUAL REPORT.

1824-5.

This Report begins with a recognition that the operations of a Literary Society when established may become so uniform as to convert a review into a tiresome and formal document. Yet there is no lack of interest in the thirteen pages which follow.

It had occurred to some individuals that the most effectual way of providing for development was to dispose of the existing building and adjoining land, and out of the funds thus obtained raise a building more in correspondence with the growing importance of the institution. A Meeting of the Proprietary Members had been held in consequence. The subject was referred back to the Council for further investigation. The Council recognised the need of more efficient accommodation, but finding that a very strong objection existed in the minds of a large proportion of the members to any change of situation, they respectfully proposed that the vacant land at the west side of the Hall be occupied with such an additional erection.

The courses of public lectures followed each other in rapid succession, as many as twelve being delivered in two months on chemistry and electricity, succeeded by a series on Hieroglyphical Antiquities of Egypt and another group on Phrenology. Eight lectures followed on the Poor Laws by Mr. M. T. Sadler, who defended their principles in opposition to the views of political economists of the time. The Council expressly refrain from expressing opinion thereon, but infer from their popularity a general impression of the usefulness of the institution. We at a later date may be proud that the great philanthropic movement which the author largely inspired in courageous opposition to the existing commercial attitude was advocated thus early by him in the hall of our Society. Another series dealt with the Arts of Design, which, though not strictly included in the objects of the institution, were commended for their connection with modern refinement. The notice of these lectures induces the Council to eulogise the newly-formed Northern Society* and to wish it success; the same attitude is exhibited towards the Mechanics' Institute. The Report concludes with gratification at the progress of the work of the Philosophical Society, and an exhortation that time and talents and the products

*For the encouragement of Fine Arts. Gallery adjoining the Music Hall. Secretary, Francis Thomas Billam, who was also a Member of the Council of the Philosophical Society.

of exuberant prosperity should be devoted in some part to enlarge the boundaries of science itself.

COUNCIL MINUTES.

January 14th, 1825.

It appearing to the Council that much loss has been sustained by the Society by the Exhibition of the Effects of nitrous oxide gas at the Chemical Lectures, it was resolved that such exhibitions be in future entirely prohibited.

February 7th, 1825.

A letter received this day from Dr. Allen was read in which he stated that in consequence of engagements in London, he should be under the necessity of postponing the delivery of his first lecture until the 18th. Resolved, that this meeting considers Dr. Allen's postponement disrespectful, and declines the lectures altogether. Dr. Allen subsequently attended a meeting, his explanation was accepted, and his course of lectures authorised.

February 17th, 1825.

It was suggested that a more commodious building might be erected for the purposes of the Society in a more elevated part of the Town, and that this might also afford accommodation to the Astronomical Society.

February 25th, 1825

A new site in Woodhouse Lane (lately purchased by Mr. Jno. Jackson) was considered.

March 4th and 25th.

A report on a new erection for the Society's premises was considered, and it was found that a general objection existed against a removal to another site.

Measures were also taken for the substitution of lighting by oil gas in place of coal gas. The Council took leave most respectfully to represent to Mr. Charles Waterton that if he should be inclined to present to any public Institution any part of his valuable and rare collection of subjects of natural History, there was none by whom they would be so highly valued, as the Leeds Philosophical and Literary Society.

ANNUAL REPORT.

1825-6.

The funds of the Society which had often furnished a theme of lamentation were at length in a situation of comparative prosperity.

“For at least one year the expenditure of the Society had not exceeded its income.”

The inconvenience of the existing lecture room and the flourishing condition of the building fund induced the Members to order alterations at the cost of £1,000.

The office of Sub-curator was instituted, and Mr. Henry Denny appointed with a salary of £80. He took the place of the previous resident, his duty being to give his individual attention to the concerns of the Society, to arrange the Museum under the direction of the Curator, to accumulate, preserve and label subjects in Natural History in order to render the collections not a resort for the gratification of curiosity but a valuable school of instruction. The Council augurs well for the future in this respect by reason of the success of a Mr. Calvert in furnishing a Museum which had proved an object of distinguished local attraction and as to which they proffer their congratulation.*

GENERAL MEETINGS.

The General Meetings excited their accustomed interest, but the discussions had languished and had been on occasions omitted. A hope was therefore expressed that this important and attractive part of the proceedings should be more energetically supported.

In the death of Mr. John Luccock the Society had sustained a serious loss. By his ardent love of scientific enquiry, which his residence in Brazil had enabled him to exercise in a remarkable degree, by his industry and liberality he had rendered services that the Society valued and admired, and his activity in the interests of the temporary association which preceded the establishment of the actual Institution demanded special gratitude.

The Honorary Members were increased to 23 in number.

COUNCIL MINUTES.

September 23rd, 1825.

An alteration was arranged for in the Lecture table, a portion in a semi-circular form being cut out of the inner side, so that the Lecturer was brought nearer the audience. This little piece of originality in design has happily survived. The erection of an

*According to the Leeds Directory, 1830, p. 215, Mr. John Calvert, who had been collecting biological, geological, and ethnological objects for 35 years, opened in 1827 his Museum of 15,000 specimens to the public on payment of an admission fee of one shilling. The Museum appears in the Directory of 1845-1847, also in 1853, when Mr. Calvert is given as a Gun and Fishing Tackle Maker and a Gold and Silver Plate Dealer. In 1856 he is mentioned as a Dealer and not as having a Museum.

addition to the Buildings continued to be the subject of the Council's deliberations.

February 24th, 1826.

The purchase of the land west of the original building was completed and the ownership transferred to the Proprietary Members.

ANNUAL REPORT.

1826-27.

The Report of a Literary Society, the Council states, like the biography of a learned man, necessarily contains few striking incidents. As it would in the natural course of events by this time have attracted most of those who are interested in its work, the Members had but slightly increased in number. The Lecture Room had been satisfactorily re-arranged and a Mineral Room built over the laboratory. In the intermediate story a work room had been obtained for the Sub-Curator, and a Gallery added to the Museum. The cellars were made accessible through the back yard and consequently had obtained a tenant at £45 per annum. The cost was £1,300. Important donations of minerals and fossils are gratefully acknowledged and a subscription by members of £80 ensured the purchase of Sir Alex. Crichton's Russian and Siberian Minerals. The advantage of adequate room for display it was expected would encourage further accessions. The courses of lectures were on Invertebral Animals, and History as connected with Architecture. The ordinary lectures in response to the hint in the previous report had been amplified by discussions of considerable length, and if the Society had succeeded in diffusing the pleasures of science and literature "to the exclusion of the grovelling, debasing pursuits which too often occupy the leisure of those engaged in commerce," the Association would have more entirely realised the wishes of its founders.

The accounts point to a high level of success, the fines bringing in £58 3s. 0d.

COUNCIL MINUTES.

1826.

On receipt of a report on the comparative costs of lighting the Hall with coal and oil gas, a motion to discontinue the use of oil gas after a long discussion was negatived by 6 votes to 4.

January 12th, 1827.

Resolved that the meteorological report be given monthly to the *Leeds Mercury* and the *Leeds Intelligencer*.

ANNUAL REPORT.

1827-8.

The state of the Society was subject for congratulations. The enlargement of the Museum, the arrangement of the Mineralogical and Geological collections, the classification of the objects of Natural History, the investigations of the history of the Mummies, were evidence of internal work which was supplemented by considerable gifts, and marked by the accession of 19 New Ordinary Members.

The public lectures were carried out with continued success.

The Report concludes :—

“ Your Council, in reporting the flourishing state of your Society, have pleasure in witnessing the progress of science in neighbouring Institutions. The honour of being the foremost belongs to you. In the short time since your formation Literary and Scientific Institutions have arisen in almost every large town of the country. Their objects are various as their situations ; some paying a more exclusive attention to the cultivation of the numerous interesting departments of Natural History, whilst others render an equal homage to Literature and more diversified science.

They would rejoice in the illustrious patronage conferred upon science by the grant of St. Mary's Abbey, made by the Crown to the Yorkshire Philosophical Society* ; a Society, which, by its well-directed and unwearied exertions, merits the thanks of all interested in the increase and extension of knowledge.

In conclusion, your Council would warn you not to be satisfied with what has already been achieved. They would stimulate you to renewed efforts, and then each succeeding Report will be the record of increased prosperity.”

*COUNCIL MINUTES.**April 12th, 1827.*

An application having been made on behalf of the Infant School Society for the use of the Hall for their general meeting on the 6th of May it was ordered that the Infant School Society be allowed the use of the Hall.

June 29th, 1827.

The Hall was insured by the Leeds and Yorkshire Insurance Company for £11 15s. 0d.

*The remarkable discoveries in the Kirkdale Cave in 1821 led to the foundation of this Society. The British Association was formed from it in 1831. The first objects of this Society were the study of Geology, Natural History and Botany. The President of the Leeds Philosophical and Literary Society, Mr. John Marshall, with Professors Wm. Buckland, Adam Sedgwick, Charles Waterton, Sir Humphrey Davy, Baron Humboldt, were among the early Members of this Society.

ANNUAL REPORT.

1828-9.

The publication of the Transactions enabled the Society to attain a higher and more honourable station among the Institutions of England than the Founders could have anticipated. Of the General Meetings one was devoted entirely to discussion and attended with great success. The two courses of public lectures did not attract the audiences they deserved. The collections were increased chiefly in the geological and natural history sections, though still notably deficient in some details. The financial statement shewed deficits on both accounts, and the members are enjoined to apply themselves to greater efforts so that the Reports of the Council may not consist merely of melancholy retrospects of past prosperities, and that the present achievements may be forgotten in the brighter successes of future years.

This Report closes with a touching reference to the loss of an able coadjutor and amicable friend, Mr. John Atkinson, Curator and Librarian. He had held these positions from the origination of the Society. A devoted Officer and an able Naturalist, he had been liberal in gifts, and sedulous in his attention, and to him the very existence of the Museum was attributed, which remained a durable monument of his disinterested diligence and well-directed talent.

At this date Lectures must have become a generally popular attraction, and even a professional source of income, because offers of lectures were now declined from time to time. Sometimes on account of the state of the finances, at others because the Society was in recess, and not seldom without a specific reason.

*COUNCIL MINUTES.**March 13th, 1829.*

It was declared by the Council that their Minutes being in every respect private documents, should be committed to the care of the Secretary and not be produced at the General Meeting of the Society, except with the consent of a quorum of the Council. Ordered that this resolution be read at the next General Meeting of the Society.

Ordered that the 12th General Meeting of the Society be devoted to a discussion upon "Civilisation."

ANNUAL REPORT.

1829-30.

This report is less hopeful. Mr. E. S. George, who had followed Mr. John Atkinson as Curator, died before he had been a year in office. His valuable work for the Society is to be seen in the record of the many and valuable papers which had been read before it. His sad and early death deprived the Society of one whose well-cultivated powers and pleasing address had earned for him universal affection and esteem.

On the other hand many valuable presents had been received, mostly geological specimens and examples of natural history.

The two courses of public lectures, on chemistry and literary subjects, though high in merit proved far from favourable to the interests of the Society, the attendance being scanty and discouraging. In spite of the disappointing results of the session, the Council commended the influence which had been exerted in its provision of peaceful common interests to men distracted and wearied by controversies and discord.

*COUNCIL MINUTES.**February 26th, 1830.*

Subscribers are again to be reminded of the rule as to arrears of subscriptions. (The recurrence of this minute is fairly constant and will only be recorded by periodic reference).

ANNUAL REPORT.

1830-1.

The papers of this Session were the occasion of discussion of an even more highly interesting character than in any former session. The Council had exercised self-denial in the purchase of specimens and books, and their attention had been devoted to the re-arrangement, revision, and cataloguing of the Museum.

Objections having been urged against a system of compulsory attendance by means of fines, at an Extraordinary Meeting a motion for their repeal was carried, so that the attendance of the Ordinary Members, as that of the Proprietary Members had always been, became voluntary. The Council forbears to decide whether benefits have arisen therefrom, finding that of those who had threatened resignation if the fines were continued some had given up their membership in spite of the abrogation of the system. It is worthy of note that the fines which were the subject of debate brought to the Society from 1823-4 to 1830-1, more than £350.

*COUNCIL MINUTES.**October 1st, 1830.*

A paper was proposed to be read by Mr. Charles Turner Thackrah upon "The Comparative Mortality of the Various Professions in Leeds," but was rejected.

Resolved that persons resident in Leeds be not allowed to read papers before the General Meetings unless they are Members of the Society.

November 26th, 1830.

Resolved that in special cases of application from non-residents of Leeds for admission to the Museum during the periods when it is not regularly open, the Curator or one of the Secretaries be allowed to introduce such visitors personally.

Resolved that as soon as practicable the Society return to the use of Coal Gas.

December 10th, 1830.

Resolved that the calling of the Roll at the commencement of the General Meetings shall be discontinued.

ANNUAL REPORT.

1831-2.

Reference is made to the debt of £442 4s. 5d. which the Council expressly refrain from attributing to the prodigality of their predecessors.

The absence of a Trust Deed as to the property is commented upon. Gratification is expressed that a large proportion of papers had been contributed by new members, thus compensating for the temporary abstraction of professional talent which had been caused by the recent establishment of a Medical School. The formation of this institution is noted with satisfaction and a further source of congratulation is found in the recent formation of the British Association for the Advancement of Science. It is prophesied that its constitution will unite the various local institutions into one vigorous and luxurious whole:—

"Branching so broad along, that in the ground the bending twigs take root, and daughters grow about the mother tree."

*COUNCIL MINUTES.**December 23rd, 1831.*

Resolved that leave be given to the Ladies' Relief Committee to meet, so long as their services may be required, in the Philosophical

Hall every forenoon when the Hall is not otherwise engaged, on paying the expenses of the day.

January 13th, 1832.

It having been represented that visitors made a practice of standing on the cushions and benches, it was resolved that the Sub-Curator be directed strictly to enforce the former regulations of Council against such practices.

March 9th, 1832.

Resolved that the marriage of the Sub-Curator be not considered to vacate his appointment.

March 23rd, 1832.

Resolved that Tottie Richardson and Gaunt's Bill, £14 4s. 4d., for Law Expenses connected with the enlargement of the building, in 1825, be paid.

Resolved that the attention of the Proprietary Members be called to the state of the Proprietary Account, and that the question of the conversion of the shares into personal property be brought before the Proprietary Members.

Resolved that every Member of Council (the Treasurer excepted) be fined sixpence for every meeting of the Council at which he does not attend or is more than ten minutes late (Ayes, 10, Noes 2), and that the fines so paid by Members of Council be applied in aid of a fund for providing tea and coffee at the Meetings of Council and that the Sub-Curator be requested to make the necessary arrangements.

ANNUAL REPORT.

1832-3.

The finances improved during this session, and two courses of lectures were reinstated with success.

In the sessional papers a deficiency is noted of physical and experimental subjects, and students are exhorted to dismiss their apprehensiveness of being thought tedious, for science in all her various forms required only to be seen to be admired.

For the purpose of elections of Officers the Secretaries would lay before the Society a return of the respective attendances of the retiring Council.

COUNCIL MINUTES.

November 9th, 1832.

Resolved that this Society record with the greatest regret the death of Sir Walter Scott, Bart., as a serious loss to our national

literature and view with the warmest approbation the proposal to erect a public monument to his memory.

March 22nd, 1833.

That permission be granted to any members of the Council who may chose to invite the Members of the Society and Visitors to take tea at the Hall on some evening before the conclusion of the Session.

ANNUAL REPORT.

1833-4.

The prosperity of the previous year was continued. The series of public lectures being extended and diversified, attracted satisfactory audiences. But the distinguishing feature of the session consisted in four private meetings of the members for the reading and consideration of short Notices. It is stated that

“The fear that an important discovery may be lost to the world is dissipated by such instruments of the diffusion of knowledge, and if our Institution may not have been the means of introducing some bright peculiar star of science to the world, still it extends the surface and strengthens the foundation on which some future Newton may have to establish his discoveries.”

COUNCIL MINUTES.

12th of 4th month, 1833.

(This method of expressing the date is used again on the 3rd of the 5th month, 1837.)

Resolved, that Scott's Works, presented by Dr. Disney Thorp, be accepted.

April 26th, 1833.

Resolved, that a return of the attendances of the Council be laid before the Annual Meeting (a practice which has been continued but not without suggestions of revision by members of the Council).

October 11th, 1833.

(The following minute is as brief as it is complete):—

“Resolved, that the sum of £3 be placed at the disposal of the Curator for the discretionary purchase of a selection from Mr. Nicholson's birds.”

ANNUAL REPORT.

1834-5.

The progressive improvement of the Society in finance was not continued. For the first time in its history the Society had enrolled no new member. The public lectures were reduced to one course. But the papers at the ordinary meetings were not second in interest

to those of other years. Among them two might be quoted :—

“On the General Improvement and Prosperity of Leeds as affected by the Smoke of the Factories, with some Remarks on the Means of abating the Nuisance,” by Mr. Christopher Kemplay ; and “On Leeds and Its Improvements,” by Adam Hunter, M.D.

There were five Private Meetings, successful as to the nature and quality of the papers, but the reverse as to attendance.

The Museum had attracted as visitors Dr. Buckland, Professor of Geology at Oxford, and M. Agassiz, Professor of Natural History at Neufchatel, who were able to derive from its collections important information for work on fossil ichthyology. (It is accepted that the study of fossil fishes in England began with this visit of the famous Naturalist). These two distinguished names were then added to those of Honorary Members.

An allusion is made to the recent establishment of an Institution more popular in constitution, and offering at a lower rate most of the same advantages as the Museum, being opened at a very liberal rate to the public, and equally accessible to all. Although this event was held to make an alteration in the prospects of the Society, the Council found it impossible to view with any other feelings than those of goodwill any Institution whose object was to promote mental cultivation.

This was the Leeds Literary Institution. It provided a Circulating Library, and a Reading Room in the Commercial Buildings, and Classes for French and German. Literary discussions were inaugurated, and it was claimed that hereby a “place of resort was thus provided for members where they could assemble without danger of incitement to sensual indulgence and excess.” Subscriptions were 16/— annually. In the first list of 469 members 54 were also members of the Philosophical Society, and during the first year the total number rose to 826. In his introductory discourse on the diffusion of knowledge Dr. Williamson said that for the distinction of selection for the introductory discourse he had no other claim than that arising from the accident of his holding a principal office in the Leeds Philosophical and Literary Society—a Society which originated in the same enlightened principles, and of whose liberal spirit and beneficial influence this new undertaking might be regarded as one of the legitimate fruits. Between these kindred Associations there could be no hostile rivalry. In his discourse the speaker traced the development of literature from the oral stage to the libraries of Rome, to the repositories of Monasteries,

the curricula of Universities, the invention of linen paper, the birth of the bookseller, the arrival of the printing press, the appearance of the periodical and the newspaper, the institution of public Libraries, and to the rise of Philosophical Societies, Mechanics' Institutes and popular lectures. He concluded with the special functions of the newly-formed Literary Institute. This Society lasted till 1842, when it was united with the Mechanics' Institute and affected the Philosophical Society so much that the borders of the latter were extended to include a new class—Annual Subscribers of £1 1s. 0d.

COUNCIL MINUTES.

May 9th, 1834.

Resolved, that an application having been made by the Leeds Debating Society for the use of the Lecture Room once a fortnight, the Council deem it expedient at present to decline acceding to the proposition (Ayes 6, Noes 1).

That it is expedient to publish from time to time a fasciculus of the Transactions of the Society containing the results of original investigations.

March 20th, 1835.

On a motion that the Ante-room be granted to the Infant Schools' Committee as a temporary Committee Room, it was resolved that on the understanding that this grant is not to be construed into a precedent with respect to that or any other Society, the use of the Ante-room be granted to the Infant Schools' Committee for two months, so that the arrangements of the Leeds Philosophical and Literary Society be not interfered with and such sum be paid as will fully cover all incidental expenses.

ANNUAL REPORT.

1835-6.

Financial anxieties continue, increased by the change in local assessment which caused the taxes to rise from £7 8s. 3d. to £20 18s. 7½d., with prospects of still greater demands. Two courses of public lectures were delivered by arrangement with gentlemen connected with the Leeds Medical School, one by Dr. Robert E. Grant, Professor of Comparative Anatomy in the London University, and one by Mr. James Montgomery, of Sheffield, an Honorary Member. These were considered to be the most attractive of any series submitted to the Society.

The Papers read at Private Meetings were reduced to three in

number, and a special note is made that since the commencement of the Society three other Institutions had been established which occupied some part of the same field of labour and were supported by the same individuals. These will have been the Mechanics' Institute, the Literary Society and the Leeds Library. The Museum, however, which remained the only peculiar characteristic of this Society, had received many and valuable additions. Protracted negotiations had not resulted in producing a satisfactory plan for arranging relations with external bodies, so that the Council had devoted itself to its own internal economy.

ANNUAL REPORT.

1836-7.

An endeavour to find fresh authors of papers among the members did not succeed, and as it was found impossible to effect a combination with the Literary Institution, measures were taken to render the Society more popular in its character by the admission of Annual Members at a low rate, and by granting to the Ordinary Members a transferable ticket to the lectures, to the Proprietary Members an additional ticket. Ninety-eight Annual Subscribers were enrolled, and seven New Ordinary Members, without, however, a corresponding increase in the attendance.

The Museum continued to prove the most satisfactory feature of the Society's functions. The actual entries, representing two or three times as many visitors, appear in the Visitors' Book as 2,042.

COUNCIL MINUTES.

July 1st, 1836.

Resolved that the Philosophical Society bear its share towards the expenses of watering Park Row.

July 25th, 1836.

Resolved that the Insurance Policy for the Hall be renewed with the Leeds and Yorkshire Company at the rate of £1,500 for the building and £1,500 for the Museum, etc.

October 13th, 1836.

Forty Gentlemen attended a dinner at the Scarborough Hotel, to which the Council had invited Mr. Robert Hall, one of the late Secretaries, on his leaving Leeds. The Scarborough Hotel was the chief Hotel of the town. It stood a few doors from West Bar at the left-hand side of Bishopsgate Street going down and the front faced up towards Wellington Street. Kept by Henry Scarborough. (Directory 1830).

ANNUAL REPORT.

1837-8.

The stability of the Society had been secured by the completion of the Trust Deed, which had been for some time a subject of labour and anxiety.

The volume of Transactions now published (see p. 41) had met with the approval of men of science and placed the Society in a highly creditable position. The Museum was a source of increasing attraction, the presence of the working classes being specially noted, and arguing from their experience the Council advocated easier facilities for general access to public buildings and to the "curiosities" contained therein.

The Private Meetings were now merged into Sectional Meetings. Two sections were formed, one for obtaining information on statistical subjects, the other in relation to geology. In connection with the latter an excursion was taken to the Leeds and Selby Railroad (opened in 1834) another to the Middleton Coal pits under the guidance of Professor J. F. W. Johnston of Durham, who was elected as an Honorary Member.

*COUNCIL MINUTES.**May, 1837.*

The price of the fasciculus (the Transactions) was to be fixed at 10s. 6d., and it was arranged that presentation copies (at the lowest publication price) be sent to the following Societies:—

Editors of Literary Gazette.
 London and Edinburgh Philosophical Magazine.
 Edinburgh New Philosophical Journal.
 London's Magazine of Natural History.
 Magazine of Zoology and Botany.
 Foreign and British Medical Review.
 The Lancet.
 The Royal Society.
 The Antiquarian Society.
 The Geological Society.
 Manchester Natural History Society.
 Manchester Philosophical Society.
 Yorkshire Philosophical Society.
 Sheffield Philosophical Society.
 Hull Philosophical Society.
 Whitby Philosophical Society.
 Halifax Philosophical Society.
 Cambridge Philosophical Society.
 Edinburgh Royal Philosophical Society.
 Bristol Institution.
 Newcastle Literary Institution.
 Liverpool Royal Institution.
 Linnean Society.
 Zoological Society.

July 21st, 1837.

It was resolved that persons visiting the Museum were expected to present themselves in clean and decent attire, and that children in arms would not be admitted.

August 14th, 1837.

It was resolved on the reading of a letter from the Treasurer of the Birmingham Philosophical Society, respecting the taxes on Buildings for the use of such Societies, that the Delegates to Liverpool be empowered and instructed to co-operate in whatever measures may be there resolved on for endeavouring to obtain the removal of such taxes. Five pounds were eventually sent to that Society towards expenses.

Resolved, that the rooms of this Society be at the service of the committee of the Zoological and Botanical Gardens for the purpose of holding their meetings during the ensuing six months.

A minute was adopted which had been drawn up by the President on the death of Mr. Hey alluding in affectionate, romantic, and exhaustive terms to his love of the philosophy of Natural History and especially of Botany and Geology.

March 9th, 1838.

The Hall was lent to the Floral and Horticultural Society.

ANNUAL REPORT.

1838-39.

The finances improved, the attendances were larger. The Public Lectures on Painting and on Music were very popular, and were the means of gaining new Members. Before the Session the Council had issued a card giving the titles of the papers, the names of the authors, and the dates fixed, a proceeding attended with striking success.

The appearance and arrangements of the Museum had hitherto lagged behind the development of its collections. Sufficient money having been subscribed, considerable alterations were therefore undertaken. By building up windows, introducing skylights, more wall space was obtained, at a cost of £1,020.

Leeds has for long (concludes the Report) both in the number of its inhabitants and in its commercial importance, ranked as the metropolis of the West Riding of Yorkshire, and the equal of the most important towns in England. Surely then, the support of its scientific and literary institutions ought to be at least commensurate with those of other places. "Let the success of the past session be

but the harbinger of increased exertion for the future, and we shall no longer hear the inhabitants complain that there is nothing to show the visitor, nor the stranger that Leeds contains no object of interest, save the dirty and smoky manufactories."

The Geological and Statistical Sections submitted reports.

COUNCIL MINUTES.

May 18th, 1838.

Resolved that a Petition be presented from the Council to both Houses of Parliament praying for a fair trial of Mr. Hill's plan of postage.

Meeting of Council and other Gentlemen.

June 13th, 1838.

To deliberate upon the best method to be pursued with respect to increasing the accommodation of the Museum and Hall, either by enlarging this building or erecting another.

June 20th, 1838.

It was resolved that a Committee be appointed to take into consideration for what purposes (in addition to the accommodation of the Philosophical and Literary Society and the Mechanics' Institute) it would be desirable to provide the proposed new buildings, and what sites would be eligible.

October 26th, 1838.

It was resolved that the use of the Theatre be granted to Mons. Mangiamele, the Sicilian "Calculating boy," for Wednesday evening next, without any charge for room or gas. His style was adopted from that of the English boy G. P. Bidder, born 1806, who was giving his famous expositions about 1820.

December, 1838.

It was resolved in view of several strong remonstrances which had been addressed to the President against adjourning Mr. Edward Taylor's Lectures "On the Early English Opera," to Walton's Saloon (that place having been occupied by the Socialists) that the Council cannot recognise the principle that the temporary occupation of a public room by the Society implies in the slightest degree a sanction of the purposes to which it may previously have been devoted, and therefore they decline to interfere with the arrangement of the Secretaries. The protest, however, prevailed and eventually the lectures were delivered in the Hall of the Society.

ANNUAL REPORT.

1839-40.

“For the first time during many years the receipts have exceeded the expenditure.” The Report of the twentieth Session is in accordance with this happy prologue. The number of Members and Subscribers had increased. The volume of the Transactions had been referred to in journals and reviews as containing papers not only merely respectable, but likely to advance Science.

Public Lectures on Painting and Chemistry by Mr. B. R. Hadon (Historical Painter of London) and Professor J. F. W. Johnston, were well attended. The West Riding Geological and Polytechnic Society held its meetings in the Buildings, and the Museum met with the approval of many of the best informed men in this district.

The Museum was opened to the general public on admission tickets of 6d. for one day or 5s. for the year, and a Janitor had been appointed to assist Mr. Denny and attend to visitors.

To the Geological collections the Council of the York Philosophical Society had handsomely added a collection of bones from the celebrated cave at Kirkdale. The Geological and Zoological Collections had been arranged in system, and a section of the Mummy Room had been devoted to specimens illustrating certain manufactures from the rough material to the finished fabric. This formed quite a new feature in Provincial Museums, and was retained until 1896 when it was replaced by the Savile Collection and when the idea had become developed more specifically elsewhere.

But a serious loss had been sustained in the death of Mr. Benjamin Gott, who had laid the foundation stone and had been, through the existence of the Society, a munificent supporter and friend.

*COUNCIL MINUTES.**April 26th, 1839.*

An application was received from the Mayor (Mr. Holdforth) as Chairman of a Committee held at the Court House in connection with a proposed exhibition of natural and artificial objects of interest and curiosity for the benefit of the funds of the Mechanics' Institution. He requested the liberty of meeting in the Lecture Room of the Hall to transact the business, etc., and also asked for the loan of specimens from the Museum. It was resolved that the use of the Lecture Room and the loan of specimens from the Museum of the Society, be granted.

May 17th, 1839.

It may be noted that at this period delegates were each year appointed to the Annual Meetings of the British Association.

October 4th, 1839.

A communication having been received from the Committee of the Mechanics' Institution addressed to this Council containing an invitation to a dinner to be given by them in the Music Hall in commemoration of the exhibition, it was resolved that the invitation be respectfully accepted with thanks.

October 28th, 1839.

Resolved that the Council fines be from this time enforced on Members not present at 7 o'clock, instead of as heretofore at 10 minutes after 7 o'clock.

December 17th, 1839.

Resolved that the use of the Building be granted to the Trustees of the Infirmary on Monday, December 23rd, on which day they meet for the purpose of electing a Physician, on condition of payment being made for cleaning the rooms occupied by them.

January 24th, 1840.

Resolved that in consequence of the late alteration in the rate of postage, all letters and circulars issued by this Society be prepaid.

Among the Trustees chosen by the ratepayers for the execution of the Act freeing property from the grinding of corn and malt at the Soke Mills were the following active members of the Philosophical Society :—T. W. Tottie, Adam Hunter, Edward Baines.

ANNUAL REPORT.

1840-1.

The Museum attracted increased numbers of visitors. On Easter Monday and Tuesday seven hundred persons sought and obtained gratuitous admission.

Besides fossils from Turin of the Miocene period, a Deer's horn found in the excavations at St. Peter's Hill had been added to the collection, and the acquisitions in the Zoological Department were estimated to be of great importance in view of the rising general interest in the study of Comparative Anatomy.

The donations to the Museum Fund are recorded and amount to £1,017 19s. 0d. £808 18s. 8d. had been spent on the furnishing of the Museum with cases and structural alterations. Action was

also taken in this session to advocate remission of taxes on Scientific and Literary Societies. The subject was not unnaturally recurrent. For instance in 1873 a strong petition was forwarded to the House of Parliament against such rating.

COUNCIL MINUTES.

May 22nd, 1840.

The tea and coffee fines for lectures were made exigible in the case of those only who arrived later than a quarter past seven, the hour of meeting being seven. The curve of unpunctuality varied correctly in inverse ratio to the severity of the penal regulations.

February 12th, 1841.

A letter from Joseph Hume,* Chairman of the Committee of the Society for obtaining free admission to National Monuments, having been addressed to the President recommending the adoption of certain Regulations for the admission of the Public to the Museum of this Society, and having been read, the Secretaries were directed to reply to Mr. Hume's letter informing him of the plan adopted by the Society for securing the admission of the public to the Museum of this Society.

ANNUAL REPORT.

1841-2.

The Session had proved satisfactory considering the general depression of the period. The popular feature of Professional Lectures was distinguished by a series on "The Vocal Harmony of the Italian Schools," by Mr. Edward Taylor. So large were the audiences that the Hall of the Mechanics' Institute had to be hired. A Scientific Course was notably popular, but at the General Meetings the attendance had been disappointingly small. A contrast which is recorded with pleasure is the increasing interest in the Museum, to which 1,300 visitors were admitted on Easter Monday and Tuesday. "An opportunity which in the ordinary course of events could not be expected to recur" was not allowed to pass for, by the death of a female elephant in Mr. Wombwell's Menagerie, at the moderate price of £20 the skeleton of this interesting animal was purchased.

The Council in recalling the undiminished enthusiasm of those who formed the Society twenty years before, state that all that is

*The advocate in Parliament of its reform of religious toleration and universal education.

required is a corresponding spirit in the younger inhabitants of the town.

COUNCIL MINUTES.

August 13th, 1841.

Resolved that a communication having been received from the Town Clerk by desire of the Mayor, respecting the establishment of a School of Design, the Society could not move in the question with the prospect of any practical result.

November 12th, 1841.

Resolved, That water be taken into the premises from the new Waterworks.

January 14th, 1842.

The plate of the Electrifying machine, which was cracked across, having now fallen to pieces, it was resolved that a piece of apparatus so costly and so brittle, be not repaired. N.B.—The plate had once before been repaired at an expense of several pounds.

February 11th, 1842.

That this Council deems it extremely proper and desirable that Towns and Districts themselves unable to furnish adequate accommodation for a Meeting of the British Association for the Advancement of Science should aid by their influence, advice and contributions some large towns in their neighbourhood to secure the advantage of a visit from that body ; but that, when, as in the case of Leeds, the capability of giving a suitable reception exists, and especially when an invitation has actually been given, any co-operation with a neighbouring town soliciting that honour or even any acknowledgment of its claims would tend to defeat the object in view or to postpone it for an indefinite period. (Passed unanimously.)

NOTE.—The British Association was held in 1858 and 1890 at Leeds.

ANNUAL REPORT.

1842-3.

The barometer of the Society's prosperity rises again, but the period was one of financial pressure, and economy was advised. For the rest, in this as in many other years, the Report deals with public lectures, papers at the general meetings, additions to the Museum, and these activities are put forward as an inspiration to their members towards further exertions.

*COUNCIL MINUTES.**April 8th, 1842.*

The following bills are not without interest.

		£	s.	d.
Leeds Water Works for fixing pipes	..	7	11	8
For Water $\frac{1}{2}$ year	.. .. .	0	10	0
		<hr/>		
Total		8	1	8
		<hr/>		

October 28th, 1842.

Resolved, that application be made at the Leeds Board of Works from this Council requesting that in case any of the streets or parts of them be selected for paving with wood or other material in lieu of stone, the space in front of the Philosophical and Literary Society's Hall be one of the earliest, much inconvenience being experienced from the excessive noise occasioned by the passing of carriages and other vehicles along Park Row.

ANNUAL REPORT.

1843-4.

The Sub-Curator's house was increased by two rooms. The collections of the Geological and Polytechnic Society of West Yorkshire were placed in the Museum at an annual rental of £30. The Society had lost Mr. William Hey, one of the originators, Dr. Adam Hunter, one of the first Secretaries, by death, and Mr. William Osburn by change of residence.

The Museum attracted thousands of visitors, many of whom were in the humbler walk of life, whose decorous conduct on this, as on other occasions, deserved commendation.

An exhaustive Report on the financial position by a Committee was issued, which recited the destination of the outgoings, and deprecated a reduction in the expenses of the lectures as by discontinuance the subscription would be diminished and the Proprietary Members become dissatisfied. To the Report was annexed a comparative schedule of income and expense, and the numbers of Members and Subscribers in 1839-40 to 1843-4, which not unreasonably caused some alarm. Certain suggestions were made, the foremost among these being to attract more members.

ANNUAL REPORT.

1844-5.

In pursuance of the advice recorded in the 1843-4 Annual Report an extensive canvass was made in likely quarters.

Donations amounting to £485 17s. 0d. were obtained. Nine Ordinary members and 16 Subscribers were added.

Pleasure is again expressed at the interest of the public in the Museum.

ANNUAL REPORT.

1845-6.

There were as many as sixteen Public Lectures delivered in courses of varying lengths. For one series, namely Mr. Charles Kemble's readings from Shakespeare, the Saloon of the Music Hall was engaged. Rev. Dr. Wolff's experience in Bokhara proved also singularly attractive.

Mr. John Garth Marshall, first President of the Society, died in this session. By his generosity and his intellectual interests he had contributed magnificently to the success of the Society.

A second loss is that of Dr. James Williamson, one of the earliest members whose death deprived the Society of a most valuable officer and friend.

*COUNCIL MINUTES.**May 23rd, 1845.*

An application having been made by the Council of the Leeds Exhibition through Mr. Herman Julius Marcus for a limited number of specimens from the Museum to be sent to the proposed exhibition, it is resolved that the request be complied with. (An Exhibition styled the Leeds Polytechnic Exhibition was opened at this time at the Music Hall, the object of which was to provide public walks and baths for the people).

August 15th, 1845.

Resolved, that a deputation consisting of the Secretaries wait upon Dr. Sebastian Wesley, for the purpose of ascertaining whether he would be disposed to give a course of musical lectures gratuitously during the ensuing session. Dr. Wesley was at that time organist at the Parish Church. NOTE.—He was unable to accept the invitation.

January 9th, 1846.

The use of the Lecture Room was permitted to Signor Bompiani,

teacher of languages, the lectures to be open for members and subscribers, the lecturer to issue tickets to the public on his own terms for his own benefit.

March 17th, 1846.

Resolved that in the opinion of the Council an evening *Conversazione* in the rooms of the Society might be held with advantage, but that as the season had advanced too far for making the proper arrangements this year it be recommended to the attention of their successors in office.

ANNUAL REPORT.

1846-7.

A course of lectures was delivered by Sir H. R. Bishop, and effectively illustrated by an excellent Choir. But the most prominent and novel feature of the Session was a *Conversazione* in the entire suite of rooms of the Society which were brilliantly lighted and decorated. The success of the *Conversazione* greatly exceeded the most sanguine expectations of its promoters.

Mr. Wm. Boyne's name appears among those of the benefactors of the Museum. Besides presenting some handsome donations he superintended the arrangement of the Society's coins, which is of interest in view of his admirable book on tokens.*

The presentation of a bust of the late Mr. John Marshall inspired the Council to hope that its series of busts of its prominent founders might be so supplemented as to form a gallery of those of eminent Yorkshiremen.† The ethnological details were augmented by a noteworthy gift at the hands of Mr. J. Cullingworth, of Leeds, of objects from New Zealand.

*W. Boyne's "Tokens issued in the 17th Century in England, Wales and Ireland by Corporations, Merchants, Tradesmen, etc."

†The series which was eventually collected is as follows:—

Date.	Name.	Sculptor.
1822	James Watt, LL.D. ..	..
1846	John Marshall	MacDonald, Rome.
1822	William Hey	Henry Beynes, London.
1850	Sir John Beckett, Bart. "
1853	M. T. Sadler, M.P. ..	William Beynes.
1855	Benjamin Gott	Joseph Gott, Rome.
1856	Wm. Hey, F.R.S. .. ..	.. ..
1857	Rev. Wm. Sinclair, M.A. ..	Baron Marochetti.
1865	William Gott	Adams, Rome.

*COUNCIL MINUTES.**April 24th, 1846.*

A Report was asked for as to the most effectual mode of arresting the injury sustained by the admission of too much light into the Museum.

January 8th, 1847.

Resolved that the Council do concur with other public bodies in the Town in inviting the Royal Agricultural Society of England to hold its meeting for 1848 in Leeds, considering Agriculture as a science intimately connected with many other sciences.

ANNUAL REPORT.

1847-8.

In addition to the *Conversazione* a dinner was held in the large room of the Museum which proved to be a meeting of great intellectual enjoyment. The Council reports the unfavourable influence of the depressed state of trade with regard to the collection of subscriptions and the addition of new members, but records splendid donations to the Museum—the head of an Irish Elk, an entire skeleton of the same animal, *Ichthyosaurus intermedius*, *Ichthyosaurus communis*, *Plesiosaurus macrocephalus*, head of *Ichthyosaurus tenuirostris*, and many fossils.

*COUNCIL MINUTES.**July 10th, 1847.*

A Lecturer was informed that it has never been the practice for any lecturer to enter into arrangements by which he shall deliver lectures at another institution in this Town on the same occasion as that on which he lectures to this Society.

August 6th, 1847.

This decision was modified in the case of private lectures which may be proposed for medical gentlemen.

ANNUAL REPORT.

1848-9.

The opening paper by the President, has a curious title to modern eyes :—"On the Principles of Education—for Professional Men, for Females, and for the Working Classes." The public lectures seem at this time to be more literary than philosophical, but in a course on electricity, Mr. William Sykes Ward carried out successful experiments in the exhibition of electric light and the effects of *dia-magnetism*.

In the year the Rev. R. W. Hamilton died, who had given devoted service to the Society. A member from the beginning, he had been President and had contributed no less than twenty-two papers and lectures to the Society, to the literary success of which his classical proficiency, his extensive reading and retentive memory had enabled him to contribute in a remarkable degree.

Mr. Edward Baines also died. Though never an Officer, he had been largely instrumental, by his editorial work and his zealous interest, in the formation of the Society.

ANNUAL REPORT.

1849-50.

The tone of the Report of the Thirtieth Session presents a striking contrast to the despondency of those of previous Sessions, which year after year recorded the languishing state of the Funds of the Society. A canvass of the friends of Literature and Science in the Town and Neighbourhood had produced a sum of £820 13s. 0d., the four unappropriated Proprietary Shares being taken up.

COUNCIL MINUTES.

June 29th, 1849.

Resolved that the application of the Hull Literary and Philosophical Society to inspect the Trust Deed be granted on their engaging to return the copy of the Deed kept at the Hall within ten days of the date of receipt.

July 20th, 1849.

Resolved that the application from the Redcar Museum Society for a copy of this Society's Rules be acceded to and that a copy of the same be forwarded to them.

ANNUAL REPORT.

1850-1.

After one of the lectures on the Geometrical Principles of Beauty applied to Architecture and the Human Form, a Promenade was held in the Rooms of the Society. As this function was attended with the same success as a *Conversazione* held earlier in the Session it is clear that the social character of the Institution was of no small value.

The following statement will not fail to attract the sympathy of those who have been present in the Hall on crowded occasions during the subsequent years of its history:—

“In the course of the Session an improved mode of ventilation

has been adopted in the Lecture Room, and it is hoped the Members and Visitors have not been insensible to the advantages of this attempt to contribute to their comfort."

A Member, Mr. Charles Charnock, presented a valuable series of Meteorological instruments on the condition that the Council would undertake to continue the observations which he had long been in the habit of making, and to transmit copies to the British Meteorological Society of London. The observations were to be taken twice daily recording the barometer, thermometer, and hygrometer, the direction and force of the wind, the amount and form of cloud, the quantity of rain, supplemented by remarks on the prevalence of disease, the leafing, flowering, and fruiting of plants, the migration of birds, phenomena of aurora, zodiac lights, thunder and lightning (especially lightning unaccompanied by thunder) shooting stars, solar and lunar halos, and coronæ. This ambitious programme being impossible in a large City has not been carried out in its entirety, but from 1853-4 to the present time weather records have been printed in the Annual Reports.

Noteworthy additions to the Museum had been made in Geology and Zoology, so that it was claimed that the Palaeontological Department was excelled by only one Provincial Museum in the Kingdom.

The Society was selected to receive the publications of the Smithsonian Institute of Washington, U.S.A.

COUNCIL MINUTES.

September 6th, 1850.

There is again evidence that various persons were taking up popular lecturing as a source of income as many offers of lectures are declined during this and other sessions about this time.

A prospectus indeed is referred to in one case where lectures are selected by number.

December 27th, 1850.

Resolved that Mr. H. Denny be authorised to present 10s. to the keepers of Wombwell's Menageries for the bodies of a young lion, an armadillo and a boa constrictor.

January 17th, 1851.

The Social event which was finally styled The *Conversazione* and once described as a *Soiree*, was this year called the *Promenade*.

ANNUAL REPORT.

1851-2.

Mr. C. C. Clarke delivered a course of lectures on the Comic Writers of England, "although as regards himself there is not the attraction of novelty, he nevertheless invariably drew large audiences."

Mrs. Fanny Kemble made her first appearance in Leeds under the auspices of the Society. At her four readings from Shakespeare the Music Hall was filled with numerous and fashionable audiences.

Mr. William West died while holding the office of President. He had taken a prominent part in the work of the Society since its formation. He had acted as Honorary Secretary, had delivered three courses of lectures and twenty-three papers.

An important discovery of the bones and teeth of the Great Northern Hippopotamus was made this year at Wortley in the brick yard of Messrs. Longley. These specimens were acquired by gift and added to the Museum.

The Council, in view of the decision by the Town to erect a Town Hall, recommended to their successors that an invitation be forwarded to the British Association to hold a meeting at Leeds when this building should be completed.

COUNCIL MINUTES.

May 23rd, 1851.

As in every Session, the first Council Meeting dealt with the tea, coffee and fines resolution and changed its hours to suit its Members and catch its delinquents. The printers for the Session were then decided upon and the lecture list proceeded with.

November 1st, 1851.

Resolved, That the Secretary of the Mechanics' Institute and Literary Society have free admission to the papers and lectures.

January 19th, 1852.

A special meeting of Council being held to consider a suggestion which had been thrown out, of the possibility of some provision being made for the Museum and Lectures of this Society in the proposed Town Hall. It was resolved that if better accommodation of this Society and its Museum as an independent Institution were to be proposed by the Town Council, the Council of this Society would give it their best consideration.

February 13th, 1852.

The gratuitous use of the Lecture Room was granted to the Yorkshire Branch of the Provincial Medical and Surgical Association

ANNUAL REPORT.

1852-3.

The Council makes a special allusion to a course of lectures by Mr. Theodore West, and to the fact that a son was treading in the steps of his father in serving the Society. There are happily very many instances of the continuity of family interest, Membership in some cases extending through three generations, Offices being held by father and son, as the repetition of the names of Atkinson. Baines, Bedford, Eddison, Hey, Lupton, Marshall, Teale, etc., shows. Lectures, too, have been delivered by father and son. The list will be found to include Atkinson, Baines, Clark, Hey, Marshall, Scattergood, Teale and West.

The Council appeared to be a little afraid that the very great and repeated successes which had attended Mrs. Kemble's Shakespeare readings might lead members to lose sight of the more important scientific purposes of the Society.

The Promenade held on March 4th was recorded as one of the ordinary Meetings, and was made the occasion for an exhibition of works by Leeds Artists. Upwards of 300 were collected, the rooms were kept open for a fortnight, and the exhibition was visited by above 1,300 persons.

Admission to the Museum which had previously been accessible to strangers on the written order of a member was now obtained by any one on payment of a charge of one penny, or without charge if accompanied by a Member, during the hours 10 to 4 o'clock October 1st to March 31st, 10 to 6 April 1st to September 30th. It is noted that a similar course had been adopted in other Institutions with great advantage. The interest at this time appears to have been specially attracted to the presence of the hippopotamic and other mammalian remains discovered at Wortley, in the neighbourhood of Leeds; indeed, in the following Report it was claimed that the Museum stood possessed of the most extensive series of this class in the Kingdom.

COUNCIL MINUTES.

June 4th, 1852.

Notice was given that at the next Meeting of Council it would

be proposed that Members of Council not present at the General Meeting shall be fined sixpence.

ANNUAL REPORT.

1853-4.

Readings in Shakespeare were again given but the demand for a lecturer of eminence in Science was unsatisfied.

Following the example of the Royal Institution, the Council instituted a course of gratuitous Juvenile Lectures during the Christmas vacation with satisfactory results.

At the *Conversazione* the most noteworthy novelties were an exhibition of educational apparatus and a collection of photographs of which there are now no records.

The penny admission to the Museum attracted 8,052 visitors during the year. (In 1918-9 the visitors were 36,000 in number).

A cheap guide to the objects of the Museum was instituted.

An abstract of meteorological observations was printed for the first time in this Report, and the practice has been carried on to the present day.

ANNUAL REPORT.

1854-5.

The Society was subjected to a severe strain owing to a time of adverse commercial conditions and the uncertainties arising from its possible union with the Leeds Library.

At the *Conversazione* the collection of Coins and Medals bequeathed by Mr. George Baron of Drewton Manor, photographs by Members of the Leeds Photographic Society, and illustrations of the seat of war in the Crimea were the attractions.

The magnificent Baron Collection was not catalogued until Mr. Aquila Dodgson carried out the work, giving five years of devoted labour to it. The collection includes 216 Gold Coins and Medals, 1,259 Silver Coins, 246 Bronze Coins, 363 Roman Brass and Greek Bronze Coins, besides various Tokens, Money Weights, &c. The Coins consist of Roman, Greek, Saxon, Early British, English, Scottish, and Oriental examples, besides 600 Casts from Roman First Brass Coins in the collection of Admiral Smyth. The collections comprise beautiful examples of Papal and also other Medals commemorative of celebrated Historical Personages and Events.

Among the papers was one read at a General Meeting, of which the text if extant would have been of the greatest interest in the

present day, "On the Causes which Influence Health and Disease in Leeds, viz., Climate, Soil, Water, Dwellings, Habits of the People, &c."

A basis of Union between the Leeds Philosophical and Literary Society and the Leeds Library was recommended by the Committee on the following lines :—

New Tickets of Membership to be £10. The Annual Subscription to be 25s.

Proprietary Members, P. and L. Soc., of £100 shares in the Philosophical Hall to be exempt from Annual Subscription.

Subscribers, P. and L. Soc., to be entitled to tickets on payment of £7. *Shareholders in the Library* to pay an Annual Subscription.

The number of Shareholders in the United Institution to be limited to 1,500.

These terms were reported to have the general support of the Philosophical Society's constituency and great hopes were expressed of the value of the United Institution.

Dr. John Deakin Heaton lectured at the Philosophical Society on "Town Halls." The tower had not formed any part of Mr. Brodrick's original design for Leeds but in the paper a tower was strongly advocated as adding dignity and beauty to the structure. This advice was based on the speaker's experience of notable buildings abroad, and certainly affected in no small degree the final decision. The Town Hall was opened in September 1858 by Queen Victoria and on the four succeeding days a Musical Festival was held in it.

ANNUAL REPORT.

1855-6.

At one of the General Meetings Sir Joseph Paxton (who designed the Crystal Palace) gave a lecture on a subject which would be full of attraction in 1920. "On the Growth of London, and other large Towns in the United Kingdom, with suggestions for their better Architectural Arrangements, Internal Communication, and Sanitary Improvements." Lieut.-Col. Rawlinson gave a lecture on his researches in Assyria and Babylonia which attracted to the Hall one of the most numerous audiences ever assembled to this date. Both these gentlemen became Honorary Members.

At the *Conversazione* various relics from Kertch, from the battlefields of Alma, Balaklava and Inkerman were exhibited.

The Council records additions to the skeletons of animals and deplores the absence of one of the human subject, for the provision of which they look to the Members of the Medical Profession.

The scheme for the Union with the Leeds Library, though meeting with the general approval of the Members of the Society, was still under discussion, and the Council advised that if no decision were reached in the month of June following, the negotiation should be deemed terminated.

ANNUAL REPORT.

1856-7.

The Society and the Leeds Library joined in promoting a lecture by Dr. Sandwith on the campaign in Asia Minor, with special reference to the Siege of Kars.

No decision had been arrived at as to the proposed Union, a delay which was seriously felt. The terms had been approved at an extraordinary General Meeting of the Society. It was decided that full information should be collected and laid before each Institution as to the position and requirements of each, and a most exhaustive Report was issued by the Sub-Committee. They dealt with :—

1. The extent of land belonging to the two Societies.
2. The amount of accommodation at present enjoyed by them.
3. Their existing Income and Expenditure.

1. Philosophical Society 458 yards.
(Museum and Curator's House).

Library 341 yards.

2. The Museum of the Philosophical and Literary Society was equal, if not superior, to that of any other Provincial Institution. It comprised 7,000 Geological, 1,300 Mineralogical, 6,000 Zoological Specimens, the most remarkable Mummy in the Kingdom, and other collections, with 1,200 volumes. The capacity of the Library was given in feet of available wall space, at 534, it was found that each square yard holds 30 folios, 40 quartos, 90 octavos or 120 duodecimos. It was agreed that the accommodation for both Hall and Library should be doubled. Sites for a new building were considered. Among them :—

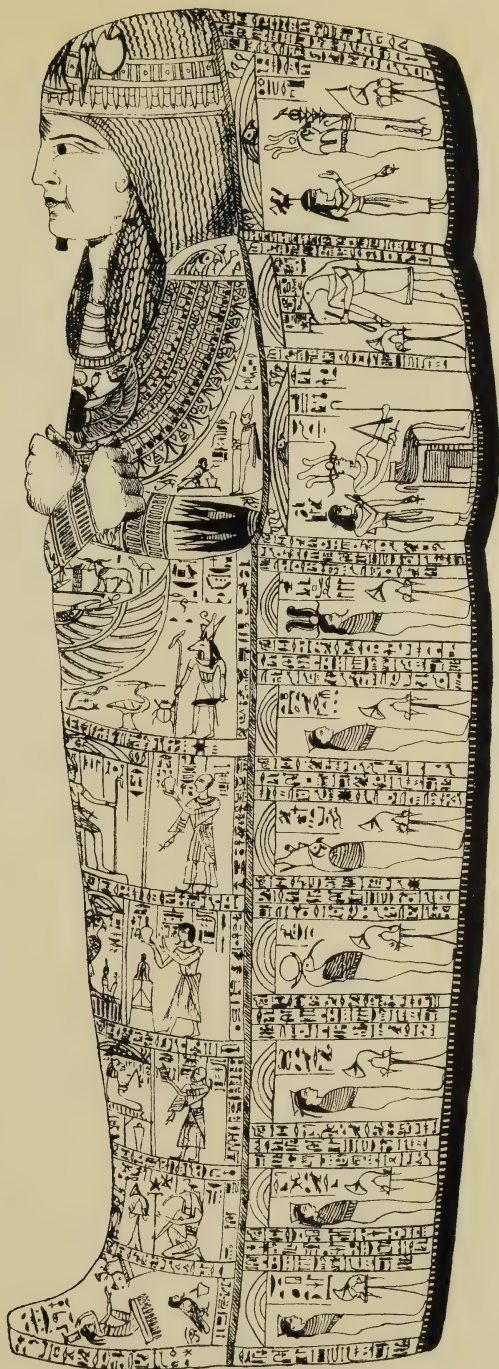
The Court-house.

Two plots of land in Cookridge Street.

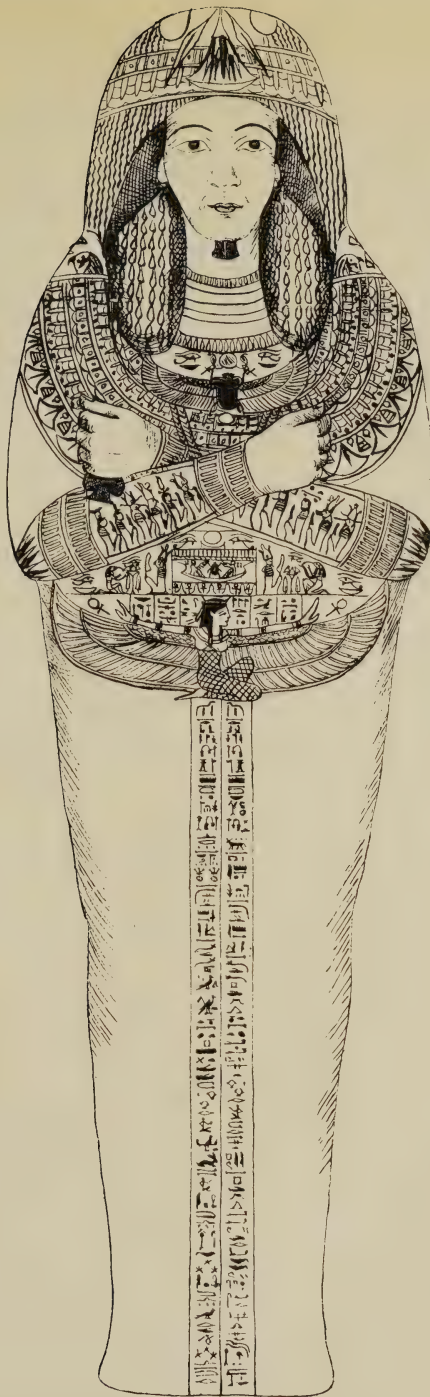
A plot of land in South Parade.

A plot of land near the New Town Hall.

In the opinion of the Committee the ground between the Library and Albion Street being vacant provided the most convenient site for a combination of the two Institutions. A plan and estimate



COFFIN OF MUMMY.



INNER CASING OF COFFIN OF MUMMY.

had been submitted through the kindness of the Borough Surveyor, which showed ample space on the ground for the contemplated objects, and that the cost including the ground would probably not exceed £8,500.

It was proposed that the Union should not take place until three hundred new shares of £10 each had been subscribed for. This would give a sum of £3,000, which, with £5,770, the produce of the sale of the Philosophical Hall according to the estimate of an experienced builder, would raise £8,700 for purchase of Ground and cost of Building.

The Income of the New Institution would be as follows :—

800 Subscriptions at 30s.	..	..	..	..	£1,200
Rents	..	..	..	..	£220
Ladies' Tickets, Fines, Lectures, Admission to					
Museum, say	..	..	..	..	£100
					<hr/>
					£1,520
					<hr/>

The report concluded with a strong recommendation of the proposed Union and appends very interesting comparative tables of the Income and Expenditure of the two Institutions, of which 10 years average, 1847-1856, were as follows :—

										INCOME.								
										Hall.			Library.			Both.		
										£	s.	d.	£	s.	d.	£	s.	d.
Subscriptions	..	..	255	17	8	..	522	11	2	..	778	8	10			
Lectures	..	..	25	16	1	..	—			..	25	16	1			
Sundries	..	..	14	3		..	18	5	9	..	19	0	0			
Admission to Museum			9	10	3	..	—			..	9	10	3					
Rents	..	..	34	15	5	..	214	5	0	..	249	0	5			
Special Fund	..	..	92	0	8	..	44	14	4	..	136	15	0			
										<hr/>			<hr/>			<hr/>		
										£418	14	4	£799	16	3	£1,218	10	7

Dr. Whewell, Master of Trinity College, Cambridge, read a paper and was elected an Honorary Member. The Honorary Members numbered in this year 65. Rev. Wm. Sinclair who had been President for six years, and had taken a noteworthy and active part in its work, left Leeds to the very great regret of the Members and the Council.

ANNUAL REPORT.

1857-8.

No further mention is made of fusion proposals of the Philosophical Society and the Leeds Library and the Reports of this and the following years record a series of very successful seasons in all departments.

Among the papers was one under the title of "Notes on English Architecture" by E. M. Barry, son of Sir Charles Barry who was architect of the Houses of Parliament, was architect himself of the Leeds Grammar School of which his brother Rev. Alfred Barry was headmaster. He was also responsible for the building of Burlington House Court. Mr. W. E. Forster, of Bradford, lectured "On the Mogul Dynasty in India," dealing with the conditions of India under British Rule, and in this year of the Mutiny naturally attracted a large audience.

In anticipation of the forthcoming meeting of the British Association a considerable expenditure was undertaken in the improvement of the Museum, the cost being defrayed by the liberality of the Members.

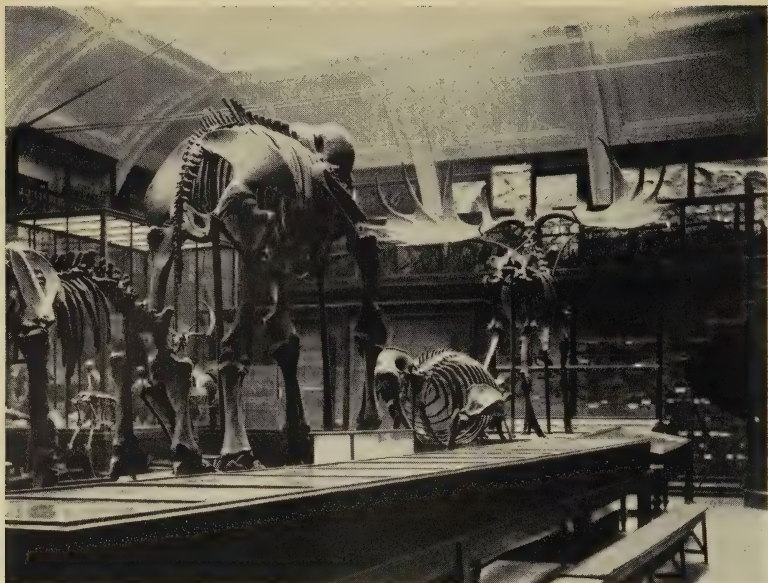
At the *Conversazione* Roman objects found at Adel were exhibited.

A rule was made that all residents in the family of a Member or Subscriber (except gentlemen above 21 years of age) should be admitted to the Ordinary Meetings and to the Lectures and Museum of the Society on payment of an annual subscription of 5s. ; 18 such subscribers were enrolled, 8 Ordinary and 30 Annual Subscribers were also added.

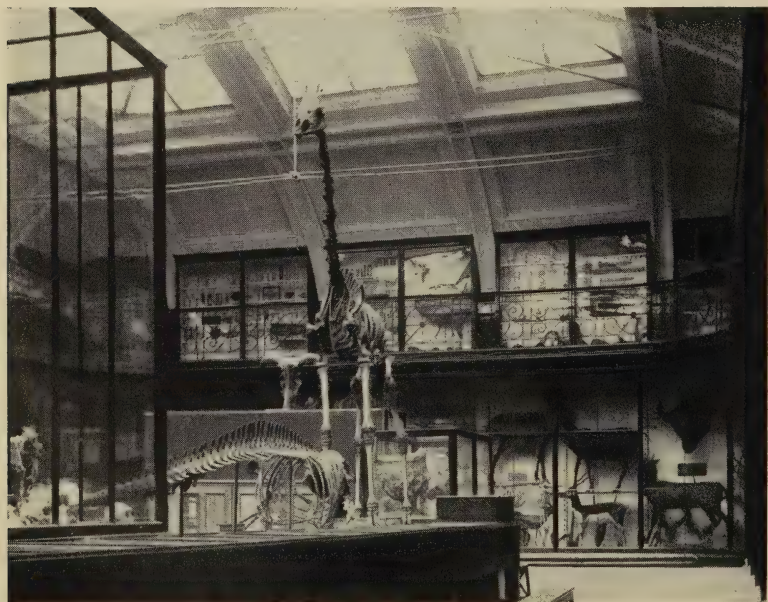
COUNCIL MINUTES.

December 8th, 1857.

Resolved that the use of the Hall be granted for the Meeting to be held on the 9th inst. with reference to the plan proposed by the University of Oxford for the examination of Pupils from the Middle classes.



ZOOLOGICAL ROOM, LOOKING SOUTH.



ZOOLOGICAL ROOM, LOOKING NORTH.

ANNUAL REPORT.

1858-9.

The Society was honoured by a paper from Sir John Herschel on "Sensorial Vision" which created so deep an impression that a request was made by the assembly that the Society obtained the privilege of publishing it.

Trophies of the recent campaign in India from the Collections of Lieut. Hill and Lieut. H. H. Stansfeld were exhibited at the *Conversazione* and a lecture was given on the Siege of Lucknow by Mr. H. M. Greenhow, Medical Officer of the Indian Army.

Very great additions were made to the collections, the development of the Museum being so great as to call attention to the necessity for considerable extension in the near future. No reference is to be found to the possibility of this being undertaken in conjunction with a scheme for fusion with the Leeds Library.

The British Association held its Annual Meeting at Leeds. The Museum was thrown open for public inspection, when the general arrangement and the importance of the specimens elicited the admiration of Scientists who were most competent to judge, amongst whom Professor Owen ought to be especially named.

Dr. Heaton, the Honorary Librarian, was engaged upon the re-arrangement and catalogue of the Library, and it was felt deeply that the extraordinary activity of the Rev. Thomas Hincks, Hon. Curator in Zoology should not be overlooked.

The Vicar of Leeds, Dr. Hook, accepted the post of President in view of the advent of the British Association, and a high appreciation was expressed of the great services conferred by him during his too brief period of office.

The gifts to the Museum during this session were remarkable in interest, value and quantity. The Museum had evidently attracted the attention of those who lived in the country near to Leeds. The list of donors this year contains the names of Lane Fox, Londesborough, FitzWilliam, Dartmouth, Feversham, Ingram, Carlisle, Effingham, Wharnccliffe, Palmerston, Beckett, Denison, Lowther, Gascoigne, Wilson, the Bishop of Ripon, Dent, and the Archbishop of York.

COUNCIL MINUTES.

November 9th, 1858.

It was decided to invite the Chamber of Commerce to hear Dr. Crawford's lecture on "China and its trade." The Leeds

Chamber of Commerce was first instituted in 1785, but its existence has only been continuous from the year 1850.

February 8th, 1859.

The Sub-Committee on the financial condition of the Society reported that an analysis of the finance shewed that for the last nine years the annual averages were :—

£325 14s. 1½d. income.

£367 5s. 11¾d. expenditure.

ANNUAL REPORT.

1859-60.

The Society completed its fortieth year in the highest prosperity that it had known. The reason of its success was attributable to two causes—the superior character of the Sessional Papers and the increasing appreciation of the fine Museum.

The acquisitions were again remarkable. A pathetic incident was connected therewith. Mr. James Motley, one of the most disinterested friends of the Society, had been collecting in Borneo a valuable series of Geological and Zoological specimens, but lost his life in the general massacre of Europeans which took place on May 1st, 1859.

COUNCIL MINUTES.

July 12th, 1859.

Dr. Hook on retiring from office of President, wrote “I wish to be permitted to place the sum of £50 to be employed as most conducive to the interests of the Institution.”

December 14th, 1859.

Resolved that the Council of the Philosophical and Literary Society is not inclined to enter into any arrangement for a removal to Albion Place except on the terms of a thorough amalgamation between the Philosophical Society and the Leeds Library.

February 2nd, 1860.

A Report from the Building Committee of the Mechanics' Institute was read. This Report contained a plan for the erection of a large building to accommodate the Philosophical and Literary Society, Mechanics' Institute, and School of Art.

ANNUAL REPORT.

1860-1.

A rule was passed on October 8th, 1860, to the effect “That in the event of the dissolution of the Society its property and effects,

whether real or personal, shall not be disposed of for the personal benefit of Members," and only under certain conditions. This rule was somewhat modified in 1862. The proviso was originated at this time as it seemed unreasonable to suppose that the donations or bequests of fellow-citizens should not have been occasionally withheld by the reflection that such contributions could only serve ultimately to enhance the value of the property of the original shareholders. By the adoption of this important resolution the Council affirmed that the valuable Museum, with the property and effects of the Society had now become, in fact, a Public Institution, securely and permanently localised in the borough of Leeds. There had arisen an urgent necessity for providing increased accommodation for Museum, Lecture Theatre and Library. At a Special General Meeting, therefore, it was determined to take steps to raise the funds necessary. It was decided to increase the Proprietary Capital by £10,000 by voluntary contributions and by shares of £50, holders of which were afterwards called New Proprietary Members, with the liability of an annual Subscription of £1 1s. 0d. and further by the creation of New Ordinary Members holding shares of £20 with a liability of an annual Subscription of £1 1s. 0d. There were therefore now six classes of Members and Subscribers. Of these the Ordinary Members became extinct in 1911, when Mr. Josiah Ramskill left Leeds. A sum of £7,132 5s. 0d. was obtained by these means. Owing to a very considerable discrepancy between the estimates of the Architect and the tenders of the Contractors, a further subscription of £1,500 was asked for. This was realised by June, 1861.

The annual financial condition had become unusually prosperous, brought about by the change in the Constitution.

A local touch of some interest was connected with a paper by Captain Blakeley, R.A. "On the Recent Improvements in Fire Arms," several of the Volunteer Rifles being present by special invitation. The Leeds Rifles were formed in 1859. At the *Conversazione* the Mummy was the subject of a paper by an American Professor who pronounced it to be the earliest human body of which there was any accurate record.

The Museum, the most important department of the Institution, had attracted 16,800 penny visitors in the year, and had been enriched by many notable additions, among them the collection

of the late Mr. James Motley, which had escaped in spite of the insurrection which caused his death. The collection attracted gifts from Mr. Dillwyn, M.P. for Swansea, Rear Admiral Sir Edward Belcher, Earl de Gray, the Marquis of Breadalbane. At this great period the Society, its work, and its possessions enjoyed deservedly a wide celebrity.

COUNCIL MINUTES.

April 26th, 1860.

A Sub-Committee asked for authority to make a provisional agreement with Mr. Calverley so as to secure a site in Cookridge Street, the terms of this Agreement to be that the price of the land should not exceed 13s. per square yard (the difference between 13s. and 15s. to be considered as a donation from Mr. Calverley), but it was not deemed advisable to enter into any negotiation which involved the necessity of an immediate outlay before any reliable estimates of the probable expenses of the proposed building were procured.

May 29th, 1860.

Mr. Brodrick having been asked to furnish an estimate for a joint building to accommodate the Philosophical Society, School of Art, and Mechanics' Institute, this was presented and included the following figures :—

Philosophical Society	..	..	..	£7,500
Mechanics' Institute	..	..	..	8,500
School of Art	..	..	..	6,000
				<hr/>
				£22,000
				<hr/>

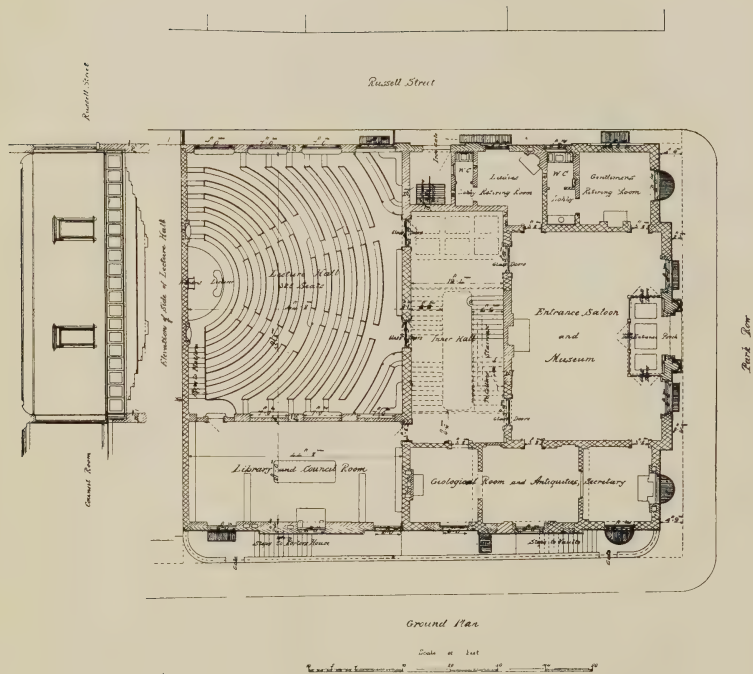
If an ornamental building with a stone front were required £2,000 to be added. It was decided to call a Special Meeting of Members to consider the proposal.

June 23rd, 1860.

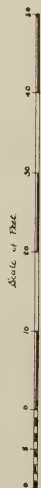
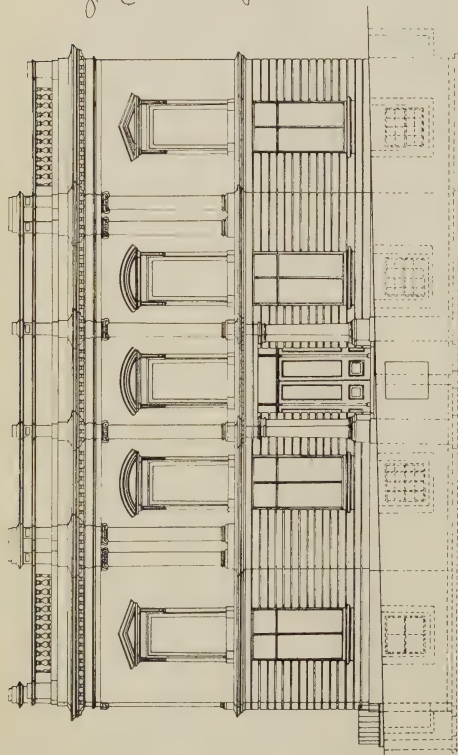
At a General Meeting it was decided to be undesirable for the Philosophical Society to join in the proposed scheme.

September 17th, 1860.

Mr. Simpson having written that he was in a position to sell the warehouse adjoining the Philosophical Hall for £3,500, it was decided to accept the offer.



PHILOSOPHICAL HALL :
GROUND PLAN OF LECTURE THEATRE, ETC.

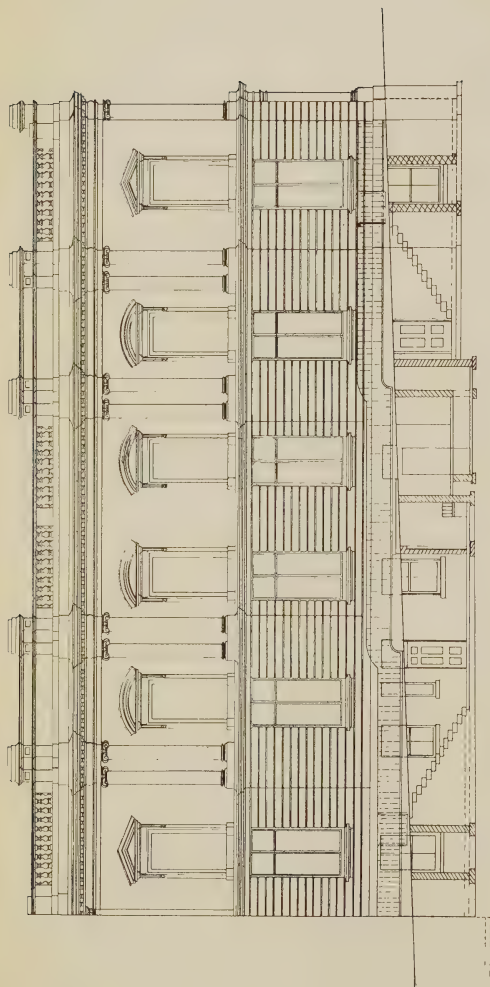


PHILOSOPHICAL HALL : ELEVATION TO PARK ROW.

*This is one of the Plans or Drawings
 referred to in my Contract...*

<i>Mr. Nicholas Lane</i>	<i>Masonry & Brickwork</i>
<i>John Hall Junr</i>	<i>Carpenter & Joiner Work</i>
<i>Samuel Powell</i>	<i>Plumber & Gasfitter Work</i>
<i>Edmund Middleton</i>	<i>Plasterers Work</i>
<i>Thos. Jackson</i>	<i>Painters Work</i>
<i>James Wilson Stone</i>	<i>Scarpenters Work</i>

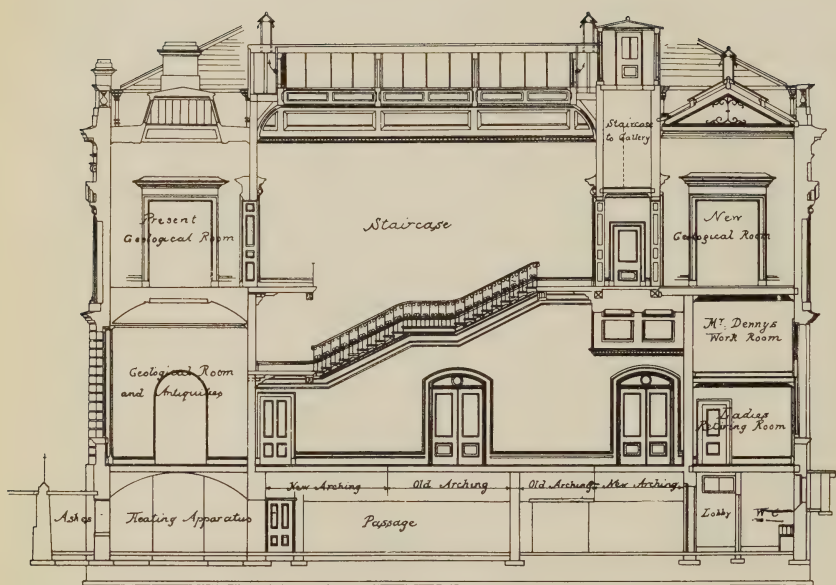
*Drawn & Engr'd. Architects,
 40 Park Row, London. - Decr. 8. 1860.*



Scale of Feet.

A horizontal scale bar with markings at intervals of 10 feet, from 0 to 60. The markings are as follows: 0, 10, 20, 30, 40, 50, 60.

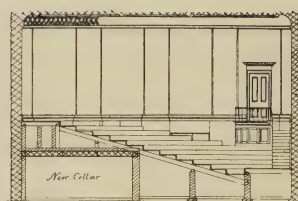
PHILOSOPHICAL HALL : ELEVATION TO BOND STREET.



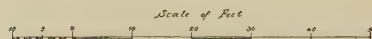
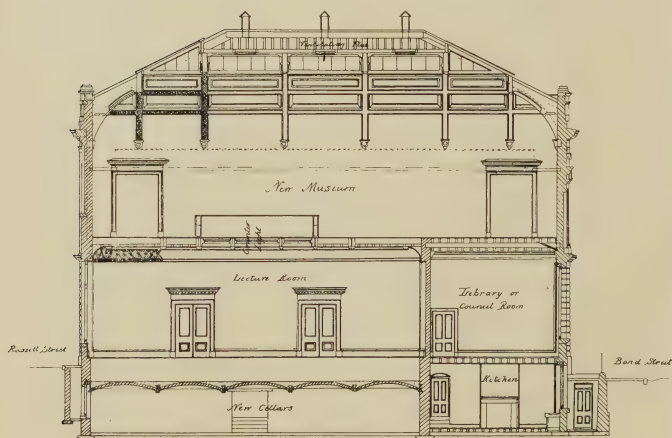
*Section thro' the Inner Hall
(looking towards the Lecture Room)*

PHILOSOPHICAL HALL :

SECTION THROUGH THE INNER HALL (looking towards the Lecture Room).



*Section thro' Lecture Room
(looking towards the Library)*



PHILOSOPHICAL HALL :
SECTION OF LECTURE THEATRE, ETC.

ANNUAL REPORT.

1861-2.

This year was noteworthy for the completion of the projected alterations to the building, by which the Lecture Room was transformed into the present Entrance Hall, a great door being inserted in Park Row and protected by the porch which has been for 60 years a noteworthy feature in Park Row. Bearing on its lintel the legend "Museum," it has stood amid the press of commercial buildings around it as a witness to the interest of other pursuits. "It extended, by the permission of the Town Council, over the paved footway, and thus allowed the entrance and exit of company from carriages, without inconvenience, in all weather." It cannot fail to be noted that among the Members those who arrived in carriages formed no inconsiderable section, and also that Park Row had become apparently of more importance relative to Bond Street than was the case when in 1820 the latter was chosen for the entrance. The answer is perhaps to be found in the position of the Railway Stations and the route to the Headingley districts. Before the railway stations existed the traffic line of Bond Street had been more utilized than the route of Park Row which was only a parallel to Briggate, the bridge road. The changes in the building made under the plans of Messrs. Dobson and Chorley were drawn up with great ability and gave general satisfaction to the Council. They are made clear by a reference to the plans following p. 72.

The introduction of vases to complete the vertical line of the pilasters, and break the monotonous level of the parapet, was suggested by high authority to the Building Committee, and unhesitatingly approved of by the architects. They were provided by the generosity of Mr. John Rhodes. There have been times at which taste tended to vases. The Town Hall perhaps set the fashion.

During the alterations the General Meetings were held in the Stock Exchange, the Council Meetings in Wine Street.

Many of the Sessional Meetings were devoted to geographical papers, prominent among which was that delivered by the great traveller Mons. P. B. Du Chaillu, on "Travels in equatorial Africa and the Gorilla country."

Mr. John Lubbock, F.R.S., delighted an audience on Geological and Archaeological Discoveries.

COUNCIL MINUTES.

April 9th, 1861.

The Council considered with favour a proposed Walking Club for the advancement of Natural History and Archaeology as associated with their Institution.

June 28th, 1861.

In consequence of the temporary closure of the Philosophical Hall the Mayor's offer of the Criminal Court was accepted.

Mr. James Brown's offer of his warehouse in Woodhouse Lane as temporary storehouse for the Society's possessions was accepted.

September 2nd, 1861.

The President read a letter from the Secretary of the Conversation Club, asking for information about the *Conversazione*. The Conversation Club was instituted on July 20th, 1849. At first it was customary to begin with tea and end with supper. Dinner was subsequently substituted for the two lighter meals. At the Conversation Club in 1851 a Leeds Improvement Society was constituted. It ceased before 1861, but this Society obtained the widening of at least one street, the appointment of a Smoke Inspector and the adoption of street paving which ensured the discontinuance of cinders as the street surface. There has been through all succeeding years a close connection between the members of this Club and the Members of the Council. A further reference to this Club is made at a Council Meeting in 1881. A suggestion was made that the last Tuesday in the month should be avoided in calling meetings of Council, "owing to the Meeting of a Club to which several members of Council belong being held on that evening." This mutual arrangement about dates held from that period.

ANNUAL REPORT.

1862-3.

The alteration of the buildings being completed, the Members and Subscribers had increased from 246 in 1857-8 to 508 in 1862-3.

The gifts to the Museum having been remarkable, the Council claimed that this Session would be looked back upon after the lapse of many future years as the most memorable in its annals. The New Hall was opened on December 16th with an inaugural address by Professor Owen.

James Glaisher, F.R.S., the Minister at Japan, the late Speaker of the House of Assembly at Sydney, the Consul in China, Professor

Pepper of London, Mr. Gilbert Scott, and Dr. Clifford Allbutt, one of the two remaining Honorary Members at the Centenary, contributed papers.

The great Bengal Tiger was presented by Mr. William Gott to the Museum, and many valuable Zoological additions were made. The funds of the Society were applied to the purchase of a tessellated pavement from Isurium (Aldborough, Yorkshire). A most valuable Roman work was thus preserved in the County to which it belonged.

The Library was increased, and in every department there is proof of the high position in membership, in possessions, and in the cultured activity that the Society enjoyed.

COUNCIL MINUTES.

March 27th, 1863.

Many examples of works of Art were arranged in the Hall. They included loans from South Kensington Museum, the fine collections of the Queen, and, also, others from the private possessions of the gentry of Leeds and its neighbourhood. This Exhibition was first thrown open at the Soiree on the evening of December 16th, the opening day of the new building, and it remained open until the 31st of January. The total number of visitors during the six weeks amounted to 35,537. The total receipts on the sixpenny admission £230 13s. 9d., on the threepenny scale £258 2s. 0d.

ANNUAL REPORT.

1863-4.

The prosperity was maintained but the Society sustained the greatest loss which they had ever had to record, in the death of Mr. William Gott. This generous friend had been interested in its development from its formation, had made remarkable contributions to the collections, had given important financial assistance in the crises which arose from time to time, and by his example and persuasion had inspired his fellow citizens in furthering the objects of the Society. Mr. O'Callaghan resigned his office as Honorary Secretary. For seven years he had devoted his entire energies to the benefit of the Society and had been active in obtaining members and contributors of gifts and papers. On leaving Leeds he was entertained at dinner in recognition of his valuable services. The Rooms of the Society were placed at the disposal of the British Archaeological Association for the Congress which was held in Leeds in October, 1863.

Under the section devoted to the Museum appears the following. Mr. Titus Salt, of Methley Park, having most liberally offered to

kill one of his finest specimens of Alpaca, for the Society's Museum, the Council while accepting the valuable present, considered that so good an opportunity for enabling the Members to partake of the flesh of this only partially acclimatized animal should not be lost. Accordingly a dinner was prepared at the Queen's Hotel, where about 60 gentlemen assembled, and the Council had the pleasure of receiving Mr. Salt as their guest. The Archaeological Department was augmented by Greek Marbles collected in Athens by the late Mr. Benjamin Gott, son of Mr. Benjamin Gott, one of the founders of the Society, died in a convent of the Piraeus, June 30th, 1817, during the travels in which he acquired these marbles. The Roman Altars and querns from Adel were deposited, a Tablet* described as having been the property of Sir Thomas More was given by Mr. Oliver Scatcherd.

An Industrial Museum was instituted to illustrate various processes in connection with wood, oils, and other materials used in processes of the trade of the district. This section was continued until 1896 when the room was required for more permanent objects.

There were at this time 59 honorary members.

COUNCIL MINUTES.

June 9th, 1863.

The gift of the Committee of the Exhibition of Local Industry held in 1858 at the Chamber of Commerce of £150 for an Industrial Museum was accepted.

November 29th, 1863.

The quality of the tea and coffee supplied to the Members received the special condemnation of the Council.

February 9th, 1864.

Resolved that one night a month be appointed for the promotion of the study of Natural Science, the meetings to be held in the Library.

ANNUAL REPORT.

1864-5.

Mr. J. Hope Shaw, who had served as President for six Sessions, and had assisted the Society for many years by his great legal knowledge and financial experience, besides reading many valuable papers, died during the Session.

*The Assumption of the Virgin. A panel for a reredos decorated in gold and colour, English work of the 15th Century. See catalogue of Exhibition held at Burlington House by Society of Antiquaries in the Summer of 1910. Catalogue published in 1913.

At the *Conversazione* a new hydraulic coal cutting machine was exhibited in motion. Works of Art, drawings by Leeds Artists, Photographs, and specimens of the first Atlantic Cable were sources of great attraction.

Important accessions to the Museum included two skulls of extinct Bears from Ireland, a slab of Breccia with prehistoric implements of flint from the cave of Les Eyzies, Dordogne Valley, Mummies of Crocodiles, Implements and bones from a tumulus on Esketh Moor, near Thirsk.

The Industrial Museum was largely augmented.

It is perhaps worthy of note that at this period of high prosperity only £45 7s. 0d. was obtained for rent of the Lecture Room, the highest sum ever obtained being £309 8s. 6d. in the session of 1919-20, while in 1918-19 the fees for the entrance to the Museum were £150 2s. 1d. for 36,025 visitors, the highest sum obtained from this source was in 1875-6, namely, for 51,112 visitors, £212 19s. 4d., this being the year of the Yorkshire Exhibition in Leeds.

COUNCIL MINUTES.

April 28th, 1864.

The use of the Library granted to the Priestley Club for the next twelve months.

ANNUAL REPORT.

1865-6.

The *Conversazione* was better attended than any held previously. Sutcliffe's Sketches of the Yorkshire Coast, a Carres Ice Machine, a Blood-detecting Spectroscope, were among the objects exhibited.

The Archaeological Department of the Museum, long the most deficient in the Museum, was fortified by further flints from Pressigny le Grand, given by the distinguished archaeologists, Evans and Christy. The celebrated excavations by Lartet and Christy were carried out in the Dordogne in 1863. Stone Implements from Bridlington and other parts of Yorkshire were also added.

Included in the Industrial Museum was a beautiful series of Models of Fungi, differentiating between poisonous and non-poisonous species. A catalogue of the books, for which the Society was indebted to the skilled and laborious work of the Hon. Librarian, Dr. Heaton, was issued to Members at cost price 6d.

The Council appealed for specimens of the natural history of the District, especially those pertaining to the Yorkshire Coal Field.

*COUNCIL MINUTES.**June 13th, 1865.*

The attention of the Repairs Committee was directed to the insecurity of the Great Staircase and floor of the large Museum under the pressure of large masses of visitors. The Architects refrained from taking action without information as to the source of criticism. The Staircase was strengthened in 1896.

March 18th, 1866.

The Society endeavoured to persuade Mr. Chantrell, architect of the Leeds Parish Church, to present to the Museum the Cross which he had removed from a wall of the old Church. This Cross was eventually recovered in 1876 and erected in the Parish Church in 1878.

ANNUAL REPORT.

1866-7.

The Membership continued to increase but visitors to the Museum and the juvenile audience at the Christmas lectures had begun to decline. In the Museum a great deal of work in cataloguing and arrangement of collections was carried out by members. The minerals had been dealt with by Mr. S. W. Salter, of London who had acted in the same way for the Woodwardian Museum at Cambridge.

A monthly chart exhibiting the daily fluctuations of barometer thermometer, hygrometer, and rain gauge was exhibited from this time forward in one of the front windows of the Hall.

*COUNCIL MINUTES.**August 7th, 1866.*

The attention of the Repairs Committee was called to the deterioration of the Stone on the exterior of the Building and they were authorised to take the necessary steps to prevent it extending. This is 44 years after building. But in the half century which has followed the injury does not seem to have spread appreciably.

November 13th, 1866.

A Sub-Committee was appointed to consider the present position of Meteorology in the Institution.

ANNUAL REPORT.

1867-8.

For exhibition at the Conversazione Old Leeds Pottery, Venetian Glass, Chinese Ornaments, Greek and Italian Gold and Silver, and

Photographic Views taken in Palestine in connection with the Exploration Fund were collected together.

The Society had to deplore the death of Mr. Thomas Pridgin Teale who had taken an active part in its affairs since he joined in the third session 1823. He had served as President, had contributed largely to the Museum, and had been author of various original scientific communications.

ANNUAL REPORT.

1868-9.

Besides the usual papers, a special course of lectures was delivered in June and July illustrative of works of Art collected in the New Infirmary.

The floor of the large Zoological Room had been for two years a source of anxiety to the Council, and as the deflection then noted had sensibly increased, two iron pillars were placed below in the theatre to provide for support of the floor. This insertion was done at the very reasonable cost of £120 6s. 0d. According to the plans it would appear that originally there had been an open space in the centre surrounded by a railing. When this was boarded over and objects placed upon it, the strain would be greater than the first design permitted.

Dr. Atlay on being elevated to the See of Hereford, placed his share at the disposal of the Society, which the Council decided should be held from time to time by the Vicar of Leeds.

Among the additions to the Museum were flint implements from Adel Reformatory grounds, lamps, keys, musket balls, pipes and glass from the site of the Chantry of St. Mary Magdalene at the junction of Briggate and Upperhead Row, and an early map of Leeds (Cossins 1720) given by Miss Sharp.

A meeting of old and new Members was projected on the completion of 50 years of life of this, the oldest Scientific Institution in Yorkshire. It was believed that sixteen still survived of those who had been present at the first meeting at the Court House, held December 11th, 1818.

COUNCIL MINUTES.

April 14th, 1868.

Reference was made to a certain lecture and it was resolved that while the Council can not hold itself responsible for the conduct of the Meetings that may take place in the Hall, or the opinions

that may be expressed on such occasions, it has always endeavoured to exclude such as are calculated to give offence, and that it had on the recent occasion an assurance from the gentlemen who secured the Room that the object of the meeting was in strict conformity with its rules. The Council regrets, however, to find that such was not the case, and will in future require that the object of the meeting shall be distinctly stated before the Hall is allowed to be engaged.

November 10th, 1868.

The turnstiles at the entrance, having exercised the minds of the Council at many meetings, were now condemned.

It was resolved that the President be requested to write to Lord Feversham for permission to open the tumuli on his Estate at Bilsdale in the Spring or Summer of 1869, and that Mr. T. W. Stansfeld should also, when he sees Mr. York of Bewerley Hall, ask permission to examine the tumuli on his estate.

March 9th, 1869.

Resolved that the President be requested to draw and sign on behalf of the Council a petition to the House of Commons in favour of Mr. Sykes' Bill for the protection of Sea Birds and to forward the same for presentation to one of the Borough Members.

ANNUAL REPORT.

1869-70.

In referring to the Society's work of half a Century, the Council took pleasure in recording that kindred Societies had been established in York, Hull, Sheffield, Halifax, Whitby, Scarborough and Bradford. Experience had proved that the Members had not been, as probably it was originally anticipated, principally occupied with the investigation of local geology, or the fauna and flora of the district. The meetings of the Society had on the other hand been attended by a miscellaneous audience rather than mainly of students of science, and the result had been that the work had developed rather in the popularisation and dissemination of knowledge than in local investigation. This tendency pointed to the desirability of increasing the facilities of access to the valuable collections, and of rendering them more available for public instruction. In consequence, in answer to an application from the Yorkshire Board of Education, free admission was granted for 10

School Mistresses studying Physical Geography. A Sub-Committee reported that

“Not a little advocacy of technical and science education has been of a vague character, and has failed to discriminate between the teaching of the principles of science and training in their application to the industrial arts. Recognising the importance of the latter to the strength and happiness of the State, and especially to the continued prosperity of such a community as our own, still it is evident that scientific method would first provide for teaching the elements of natural science. For this procedure it would be easy to adduce many reasons besides that of an increased material prosperity. The Committee believe that it would be an error to consider the claims of only a single class of people, and they have to recognise the fact that hitherto there has been almost a total absence of science teaching in every other class of the community, equally with that of artisans. The teaching of the science of Chemistry is already provided for by the classes of several public Institutions in this town. It is to certain Natural History subjects that the Committee would look as being those in which this Society may render important service through its Museum.”

They consulted Professor Owen, who wrote as follows :—

“To descant on the abstract advantage of a knowledge of the works of creation is neither requisite nor convenient to my present purpose. I may assume the general admission that collections of the several classes of such objects duly prepared, named, and arranged, so as to give the utmost facility for inspection and comparison, are the indispensable instruments in the acquisition and advance of that knowledge. I have entered more fully elsewhere (address to the British Association at Leeds, 1858) on the reciprocal advantage to both Curator and Museum arising out of the duty of the former to give public lectures at the museum, illustrative of the collections, and I will only here repeat my conviction that one of the applications of a national museum of natural history involves as a duty of the chief curator of each class of department, the delivery of an annual course of lectures on the classification, habits, instinct, and economical uses of such class or department of natural history.”

The Committee selected the subjects of Zoology and Geology as the most appropriate to the collections and as a result the Council arranged with Mr. Louis C. Miall, of Bradford, to deliver twelve lectures upon Geology. The attendance on the first evening was 100 including a large number of ladies, and this number was well maintained on subsequent evenings.

Charts were also prepared explaining the classes in the Mammalian collection. For a period of about six months the Museum had

been open to the public on Monday Evenings from seven to half past nine o'clock, and the average attendance had been 32. Greater numbers might be hoped for in the future if the practice lately introduced at the British Museum of lectures by Guides on the Special Collections were adopted.

Among the papers one might be noted on International Decimal Coinage by Dr. William Farr. The movement had originated in France before the Franco-German War.

A commemoration dinner took place at the Great Northern Hotel on May 3rd, 1870. It was presided over by Mr. Edward Baines, M.P., one of the original founders, and the following gentlemen were present :—

Dr. Heaton, President of the Society.

The Vicar of Leeds (Canon Woodford).

Mr. Wm. Hey.

Mr. H. W. Ripley, President of the Bradford Philosophical Society.

Mr. Alderman George.

Mr. Alderman Oxley.

Rev. Charles Wicksteed.

Dr. Kelburn King, President of the Hull Philosophical Society.

Mr. Samuel Clapham.

Mr. J. E. Norris, President of the Halifax Philosophical Society.

Sir A. Fairburn.

Mr. J. W. Tottie, Coniston Hall, Bell Busk.

Dr. Chadwick } (Vice-Chairmen).

Mr. Nunneley.

Dr. Allbutt.

Mr. Edward Atkinson.

Mr. J. W. Atkinson.

Mr. Alderman Addyman.

Mr. J. R. Asquith.

Mr. F. Baines.

Mr. Alderman Barran.

Mr. R. H. Braithwaite.

Mr. Wm. Brown.

Mr. J. P. Clapham.

Mr. S. Clapham, Jnr.

Mr. Joseph Cliff.

Mr. Wm. Cooke.

Mr. T. T. Dibb.

Mr. Henry Denny, Curator of the Society.

Dr. Eddison.

Mr. R. W. Eddison.

Mr. F. Eddison.

Mr. H. A. Emsley.

Mr. E. Filliter.

Mr. F. Ferns.

Mr. S. Freeman.

Mr. James Fox.

Dr. Greenhow.

Mr. Abraham Horsfall.

Mr. John Horsfall.

Mr. James Holroyd.

Rev. W. Lee Howarth.

Mr. J. W. Hill.

Mr. W. Huggon.

Mr. J. Ingham Ikin.

Mr. Wm. Illingworth.

Mr. Edward Irwin.

Mr. John Latimer.

Mr. Francis Lupton.

Mr. Arthur Lawson.

Mr. John Manning.

Mr. S. D. Martin.

Rev. J. H. McCheane.

Mr. Charles Naylor.

Mr. Alderman Nussey.

Mr. Thomas Nussey.

Mr. Gustave Nathan.

Mr. Henry Oxley.

Mr. W. N. Price.

Mr. R. Reynolds.

Mr. James Rider.

Mr. T. W. Stansfeld.

Mr. J. E. Smith.

Mr. James Seaton.

Mr. Joseph Shackleton.

Mr. T. P. Teale.

Mr. Joseph Thackray.

Mr. Samuel Taylor.

Mr. R. B. Turner.

Mr. W. S. Ward.

Mr. Edmund Wilson.

Mr. W. Ward, of Churwell.

Mr. C. W. Wardle.

Mr. T. Whiteley.

Mr. Thomas Wilson.

Below is a list of the Toasts and Speakers :—

<i>Toast.</i>	<i>Proposed by.</i>	<i>Replied to by.</i>
"The Queen"	The Chairman ..	
"The Leeds Philosophical and Literary Society, and the Health of the President, Dr. Heaton"	The Chairman ..	Dr. Heaton.
"Our National Universities"	Dr. Heaton	Canon Woodford, for the University of Cambridge. Rev. Mr. McCheane, for the University of Oxford.
"The Health of the Founders present"	Rev. Charles Wicksteed	The Chairman. Mr. Hey. Dr. Chadwick.
"The Mayor, Corporation and Magistrates of Leeds"	Sir Andrew Fairbairn	Mr. Alderman Oxley (in the absence of the Mayor, who had been called off to London).
"Success to the other Philosophical and Literary Societies"	Mr. F. Baines ..	Dr. King, the President of the Hull Philosophical Society.
"Applied Science and the Industrial Arts of Leeds"	Mr. J. W. Tottie ..	Mr. Alderman George.
"The Health of Mr. Baines, Mr. Wm. Brown M.P."		Mr. Baines, the Chairman
"The Health of Mr. H. Denny"	Dr. Chadwick.	Mr. Denny.
"The Health of Mr. Ikin and the Members of the Dinner Committee"	Dr. Heaton.	

Of those present Mr. Baines and Mr. S. Clapham had been at the original founding meeting. Mr. Wm. Osburn and Mr. J. M. Tennant were unable to come. Mr. Baines read out the names of those who attended on December 11th, 1818.

COUNCIL MINUTES.

June 1st, 1869.

The gratuitous use of the Philosophical Hall was granted for the accommodation of the British Medical Association during the last week in July.

Resolved that the use of the Library be granted to the Ladies' Educational Society for the purpose of the first Cambridge Local Examination, and that on the present occasion no charge be made.

December 14th, 1869.

The insurance was arranged at £5,000 on the building and fixtures and £5,000 on the museum.

March 8th, 1870.

A motion was discussed, but not carried, that the Lecture Hall

either be not let for any meetings for the discussion of questions of party politics or religious controversy, or that if let for any, it be let for all such purposes at the discretion of the President.

COUNCIL MINUTES.

May 24th, 1870.

Resolved that Mr. Denny make arrangements for opening the barrows upon the Estate of Lord Feversham and Mr. Tennant. (The results are not recorded).

September 6th, 1870.

Resolved that the Assistant Secretary attend the Meeting of the British Association at Liverpool to aid in obtaining Lecturers for the approaching Session. (The allegiance of the Society to the British Association has never failed since its first mention, and the note of its immediate practical value merits a record).

November 8th, 1870.

Attention being called to the advertisements of the Free Library Committee in which they solicit the donation or loan of specimens in Archaeology, etc. for the purpose of forming a Free Museum, it was suggested that the President do confer with the Chairman of the Museum Committee of the Town Council on the subject.

March 4th, 1871.

The Lecture Room was granted to the Ladies' Educational Association (now the Yorkshire Ladies' Council of Education) for the lectures to be delivered by Mr. James Stuart on the extension of University teaching in large towns.

March 4th, 1871.

The Council record their sincere regret at the loss which the Society has experienced in the death of their valued Curator, Mr. Henry Denny. See Annual Report, 1870-1.

March 14th, 1871.

It was reported that the Mayor had promised to withdraw the advertisement of the Free Library Committee for Archaeological specimens.

ANNUAL REPORT.

1870-1.

In this Session there were as many as twenty papers at General Meetings. In the list of authors are the distinguished names of Glaisher, Huxley, Ouseley, Procter, Seeley, Trollope.

The expenses were considerable and in consequence the subscriptions of ladies and junior subscribers were raised to 7s. 6d.

A course of thirteen lectures on Botany was delivered by Mr. L. C. Miall. During the session the able and valued Curator of the Society, Mr. Henry Denny, was removed by death. He had served the Institution assiduously for 45 years, and every person connected with the Leeds Philosophical and Literary Society was aware how greatly the Museum, in all its branches, increased under his care and in consequence of his zealous labours. Mr. Denny was a man of extensive scientific knowledge and well-known to the students of certain recondite branches of Natural History by the monographs which he published in his younger days. He was the first Stipendiary Curator of the Leeds Museum, with which his name will always be connected. The vacancy occasioned by Mr. Denny's death was filled up on April 5th by the election of Mr. L. C. Miall, Curator to the Bradford Philosophical Society.

Professor Miall was pre-eminent as a lecturer. He was a great teacher. His expositions of his subjects were easy and familiar and he is well-known for his books and articles on Natural Science. On his appointment to the Museum he was best known as a botanist and a geologist. Later he specialised in the bionomics of insects, his "Life of Aquatic Insects" being an excellent exposition of his method of work.

The Society has to thank Prof. Miall for a series of Guides in which he set forth in a remarkably clear manner the general principles of the various subjects and proceeded to classify the examples in the Museum and endowed them with human scholarly interest. The Mineral collection in 1873; the Fossil collection in 1873; the British Birds in 1874; the Megalichthys in 1885 are from his pen. Mr. Miall's important and scholarly work in the Society continued for 20 years, and he was kind enough to write an attractive memorandum which appears in this volume pp. 145-150.

ANNUAL REPORT.

1871-2.

The strength of the Society's roll of names reached a total of 700, and as a result of the large numbers, those entitled to attend the meetings were required to show their tickets at the entrance.

Prof. E. A. Freeman and Dr. W. B. Carpenter were among the lecturers. The Annual Conversazione having been postponed

from December owing to the illness of the Prince of Wales, was held on February 1st. It was distinguished by a large and interesting collection of pictures, photographs and botanical diagrams, contributed by the Science and Art Department at South Kensington.

In connection with the continued development of the Society's Museum as an important educational agency, the Council believed that their successors would be stimulated by a steadily increasing demand for these aids to science teaching. One influence which appeared likely to promote such tendencies was the recent opening of the Public Free Library, by which a large collection of books upon all departments of science had been thrown open to every one, the permanence of the system being ensured by its support from the municipal funds.

COUNCIL MINUTES.

September 12th, 1871.

A copying book and press were instituted.

September 29th, 1871.

Complying with an application from the Mayor, certain objects were lent for the Soirée to the Social Science Association, whose members were granted admission to the Museum.

November 14th, 1871.

The usual charge for the use of the Lecture Hall was remitted in the case of a meeting held on October 6th, to promote a Ladies' College at Hitchin. This College was the forerunner of Girton College at Cambridge. A movement to connect the Leeds Naturalists' Field Club with the Philosophical Society was considered but the terms subsequently proposed to the former were not accepted by the Club.

ANNUAL REPORT.

1872-3.

Among the distinguished authors of papers we find Crichton Browne, Michael Foster, Archibald Geikie, Dean Stanley, Balfour Stewart. Mr. Miall delivered the Juvenile Christmas Lectures and Dr. Eddison the Educational series. At the *Conversazione* the special feature of the evening's entertainment was Mr. Tegetmeier's lecture on the "Homing or Carrier Pigeon," illustrated by numerous prize birds of different breeds, apparatus of various kinds used in

the training of pigeons, and lime-light enlargements of collodion messages sent into Paris during the recent siege.

One of the most important events in its bearing upon the local interests of science, had been the introduction of a scheme for establishing a Yorkshire College of Science. Towards this proposal the Council could only feel the greatest cordiality, and they recorded this feeling in the following resolution :—

“That the Council have heard with much satisfaction of the proposal for the formation of a Yorkshire College of Science, regarding it as an object of great public importance and utility, in which they hope to co-operate by such means as may be within their power”

A prize of £5 was offered to competitors under 20 years of age for the best practical work in natural history or geology.

COUNCIL MINUTES.

June 17th, 1872.

The use of the Library and Lecture Hall on June 25th and 26th was granted without payment to the North of England Council of Education.

ANNUAL REPORT.

1873-4.

The membership of the Society was sustained during some years at the high position to which the rapid advances of the immediately antecedent years had raised it. T. McK. Hughes, Norman Lockyer, John Morley, Edward Poynter, were among the lecturers.

The educational work to which the Council desired to turn its resources in an increasing degree was in the past year provided by the Local University Extension Committee and the Gilchrist Trustees.

At the *Conversazione* a full audience experienced great pleasure in the exhibition of photographic views of Egypt shown by oxy-hydrogen light.

It was noted that in the fourth Report of the Royal Commission on Scientific Instruction and the Advancement of Science it was recommended that a system of inspection of provincial museums be organised with a view of reporting on their condition and the extent to which they are usefully employed, and whether the conditions of the loan or grant from the Department of Science and Art have been fulfilled. (The Society has kept no record of

such a visit, nor do grants appear to have been obtained). The Commissioners advised also that the establishment of Lectures on Science, accessible to all classes on the payment of a small fee, should be promoted by the Government in the great centres of population. The Council expressed its strong approval of this attitude, and referred to an allusion in a previous Report to the proposed scheme for the establishment of a College of Science for Yorkshire. In a meeting in the Hall of the Society the Donors had adopted a Constitution for their undertaking. The Council recognised in the College the basis of a powerful and lasting influence for the advancement of Science in the town and district, and believed that before long such influence would re-act in a direct and favourable manner upon the Society.

(The Philosophical Society never failed to welcome on each occasion the new movements towards education of every kind for all conditions of citizens. Not seldom they were directed towards aims which the Society had taken for its own, they were often developed on ground which had been first broken by its Council, and as time went on the functions of the Society were taken up, as they were bound to be, by the newer Institutions. Towards these works the Society has ever turned with pride while its own part in the production necessarily dwindled ; it has been rewarded by affection and often by support, a generous parent of generous children).

COUNCIL MINUTES.

May 5th, 1873.

A motion was carried that the Committee of the Yorkshire College of Science be allowed to use the Library for meetings when required.

June 24th, 1873.

A Petition was forwarded to both Houses of Parliament against the proposed repeal of an Act of Parliament which exempted scientific and literary societies from rating. The Petitioners claimed that the secondary education of the country received invaluable aid from the operations of these Societies, and believed that if deprived

of this exemption, the sole privilege conferred upon them by the State, their power of usefulness would be materially lessened. They further stated that the Philosophical Society, although it possessed no invested funds, maintained in a state of efficiency and at heavy cost a Museum of Natural History and Antiquities, and that this Museum was thrown open to the public at the merely nominal charge of one penny, and was visited by 45,000 persons annually.

July 9th, 1873.

An order was made for the painting of the wall of the South Geological Room in oil colours with a section of the strata from Ingleborough to Bridlington.

ANNUAL REPORT.

1874-5.

At the *Conversazione*, wood-engraving was chosen as a subject for special illustration, and besides examples of great Masters, an unexampled collection of engravings by Bewick was assembled.

The atmosphere and heating of the Lecture Hall had occupied the attention of the Council, without, however, a satisfactory solution of the problem. The collections were enriched by the purchase of certain Roman Antiquities found in the excavations for the N.E. Railway Station at York. The Fossils and Geological series were further extended, and a young female elephant, which had died in a travelling menagerie at Bradford, was bought for the purpose of dissection. Mr. L. C. Miall conducted the investigation, and his notes on certain anatomical peculiarities were reserved for publication in one of the scientific journals. Mr. Miall also received the honour of a grant from the Geological Society of London for the prosecution of research. Special terms were arranged for lectures under the University Extension Scheme.

COUNCIL MINUTES.

October 20th, 1874.

On this as on many other dates the question of the heating and ventilation of the Hall was the subject of discussion.

January 19th, 1875.

For the purpose of dissecting the elephant a temporary shed had been erected in the yard of the School of Medicine, and the use thereof granted to the Society free of charge.

ANNUAL REPORT.

1875-6.

The President obtained a sum of £100 in the form of special subscriptions for supplementing the different collections.

On some occasions the attendance at the lectures had been smaller than the Council could have wished, a result which must probably be ascribed to the great increase of lectures and other evening engagements in this town. This is the first sign of a diminution in the Society's power to attract scientific audiences, a change which has developed with the growth of more specialised Societies, and the removal of the residential quarters to a distance from the centre of the town.

The chief feature of the *Conversazione* was an exhibition of British porcelain and pottery. Fossils, birds, pottery from Cyprus, and Neolithic implements from Bridlington were added to the Museum.

The Council noted with satisfaction the formation of a new scientific association among the members of the Society and a few gentlemen of neighbouring towns. It had adopted the title of "The Priestley Club," and held its meetings at the Museum (without charge). Fourteen meetings had been held since October and at each meeting three or four papers by members of the Club had been read and discussed. Although the scope of the new association appeared to be limited to the physical or natural sciences, the importance of these subjects could hardly be overrated, whilst the mutual principle upon which the club was based constituted a return to the system which the Philosophical and Literary Society itself adopted in the early years of its existence. The success which had attended the meetings of the Club justified the Council in regarding it as supplying a valuable stimulus to original scientific work in this town and neighbourhood. (See page 77).

*COUNCIL MINUTES.**May 28th, 1875.*

It was resolved that the attendance of Members of Council at the General Meetings be recorded, as had hitherto been the practice with regard to Council Meetings.

ANNUAL REPORT.

1876-7.

The Council regretted that the depression in trade had apparently had a detrimental effect upon the numbers of members and the

financial position, and that the lectures had failed to attract new subscribers to the anticipated extent. A schedule giving the numbers of members in each class for the current and preceding year was now introduced in the Report, and the practice has been continued to the present date.

It was, however, a source of encouragement to the Council to find that parents were becoming more sensible of the educational value of the Lectures and Museum, and that a larger number of the children of Members and Subscribers availed themselves of the advantages offered under the rule that the members of a family of a Member or of an Annual Subscriber of £1 1s. 0d. residing in the same house and being under 21 years of age might attend the Meetings of the Society on the payment of 7s. 6d. per annum. The restriction as to age not applying to ladies. The average attendance at the general meetings of the Society had been much larger than during some preceding sessions. On several occasions, indeed, the Lecture Hall was filled to its utmost capacity, notably on the 4th and 16th January, when Commander Cameron and Captain A. H. Markham gave an account of their travels. The Council learned with satisfaction that the important lecture on the sanitary arrangements of dwellings, by Mr. T. Pridgin Teale, had been repeated on several occasions to audiences composed chiefly of the working classes, and that the substance of it had been reprinted for general publication. ("Dangers to Health," J. & A. Churchill, London, 1883.)

At the *Conversazione* the main interest was devoted to scientific and mechanical apparatus, among them armour plate pierced by a shell, a "Sun" platen printing machine, and the typewriter, shown at work, the former by Messrs. Greenwood and Batley, and the latter by Messrs. Pearson and Co.

Mr. Miall, whose valuable services as General Curator of the Museum the Society had been so fortunate as to possess during the last six years, retired from the post of secretary, to which Mr. W. F. Husband was appointed. By this arrangement Mr. Miall was enabled to accept the appointment of Professor of Biology in the Yorkshire College of Science, while retaining his position as Curator of the Society's Museum. The Council took the opportunity of stating that the educational value of the museum had been greatly enhanced by the intelligence and care with which the various objects in it had been arranged by him.

The collections having grown to such an extent as to require further accommodation, a new gallery was designed for the Zoological Room, and wall cases were constructed to contain the quadrupeds, insects, shells, coral, models of mountains and lakes, which had been placed previously with other heterogeneous objects, upon the floor.

An intelligible plan was adopted by the Curator. It was found that the increasing use of the museum for teaching purposes in connection with the Yorkshire College rendered it necessary to replace the somewhat haphazard arrangement of the past by the classification almost universally adopted by teachers. The growing importance of the Yorkshire College had been watched with considerable interest by the Council, and the recent decision to include literature, as well as science in the curriculum was noted with pleasure.

Mr. H. Crowther entered upon the office of Assistant Curator in this the first of 32 years of the devoted and skilful labours which he carries out with unabated enthusiasm at the present time. His service was interrupted by 12 years, for over five of which he was Curator of the Museum of the Royal Institution of Cornwall and Teacher of several sciences at the Camborne Mining School, at Chacewater and Truro, whence he returned in 1893 to be Curator of the Leeds Society. During Mr. Crowther's Curatorship all wooden shelves in the cases have been replaced with glass, and the colour tone of the Museum has been altered from blue to white. A room has been set apart for the display of Greek and Roman objects, the very valuable gifts of Lord Savile and the Rev. John Gott, Dean of Worcester. The Inner Vestibule has been recased for the exhibit of large gifts of Ethnological objects, and the landing of the Grand Staircase for the chronological arrangement and extension of the Prehistoric Implements and of the Greek and Roman Pottery. In the Bird Room a series of cases illustrating the structure of Birds, Bird Chicks and, also, the Eyres-Monsell Collection of Birds of New Guinea has been arranged. Entirely new Collections of British and Foreign Mollusca have been added and displayed in the Zoological Rooms. The Fossils have been rearranged and the Coal Measure Fossils named and classified. Other additions include a fine series of the smaller British Mammals, large collections of Foreign Lepidoptera, and Botanical objects. A valuable collection of examples of the early art of Printing and Binding Books has been displayed. The Entrance Hall has been devoted



GREEK ROOM : MARBLE STELAE.



GREEK ROOM : MARBLE ALTAR.



GREEK ROOM : INSCRIBED STELÈ ; MARBLE DOOR.



GREEK ROOM : MARBLE ALTARS AND INSCRIBED STATUE BASE.

of late years to mechanical contrivances, and the exhibition of details connected with the Great War 1914-18.

Mr. Crowther has been the prime mover in the schemes for rendering the general public familiar with the contents of the Museum. He has delivered more than 80 Christmas Museum lectures and his activity in the Leeds Schools' Museum Scheme will be found on p. 114 (see year 1901-2), and he has assisted the author in the correction of this History to an extent which can not be sufficiently recognised.

ANNUAL REPORT.

1877-8.

The Treasurer's account showed the Society to be in an improved financial position. One considerable item of revenue (£200) was the rent received for the use of the Lecture Hall and Library. The convenient position and other advantages of the Hall as a place for public meetings seem to have been generally recognised.

The Lecture Session was opened by his Grace the Archbishop of York, on the 23rd October, 1877. His Grace had kindly undertaken to lay the foundation stone of the new buildings of the Yorkshire College on the morning of that day, and the Council of this Society agreed to a request of the College that the students and others connected with that Institution should have the privilege of attending the evening meeting. It was therefore necessary to secure a larger place of assembly than the Society's Hall, and the Victoria Hall was accordingly engaged for the occasion. A large audience assembled to hear the Archbishop read his paper on "The Worth of Life." It was subsequently published by the Society.

At the *Conversazione* the principal feature was an exhibition of paintings and drawings by local artists. During the evening a description of the telephone was given with practical illustrations. Models of ships, of hydraulic apparatus for loading guns, photographs of the Arctic Expedition were also exhibited by oxy-hydrogen light. The death of Sir Gilbert Scott, an Honorary Member, caused the Council to remind the Members of his designs in Leeds, namely, the General Infirmary and Messrs. Beckett's Bank.

COUNCIL MINUTES.

September 11th, 1877.

The heating apparatus (as on many other occasions) was reported out of order.

ANNUAL REPORT.

1878-9.

The expenditure of the year included charges for heating apparatus for the Museum, and also for the ventilation of the Lecture Hall, which had been much needed for some time past.

At the *Conversazione* the Lecture Hall was illuminated at intervals during the evening by the electric light, Siemen's patent being used, and an explanation of its principles was given by Prof. T. E. Thorpe, F.R.S. Messrs. John Fowler & Co. generously furnished a steam engine to provide motive power. The special feature of the Exhibition was a large collection of embroidered work.

The most important acquisition of the past year consisted of a large collection of marine animals received from Dr. Anton Dohrn, Director of the Zoological Station of Naples.

The dissection of the Indian Elephant which was begun in 1874-5 was completed.

Two Appendices are added to the Council's Report.

In I. Mr. L. C. Miall described how the mounting of anatomical specimens in a firm jelly seemed likely to prove a convenient substitute for immersion in alcohol or other fluid preservatives. Practical instructions were included with formulæ for the jelly. The author's first communication on the subject was made in "*Nature*," July 18th, 1878, but this paper included his later improvements.

In II. Mr. John Marshall, Professor of Classical Literature in the Yorkshire College contributed notes explanatory of five Greek inscriptions in the Museum.

*COUNCIL MINUTES.**April 30th, 1878.*

A Memorial had been put forward by the Yorkshire College, praying that if a new University be created its principle might be that of a confederation of Colleges. The Council decided to support the Memorial.

June 4th, 1878.

The ventilation of the Lecture Hall was the subject of discussion, and a Committee was appointed to deal with the subject. This incident of domestic history has often repeated itself.

ANNUAL REPORT.

1879-80.

A turn for the better having been taken by the mercantile affairs of the town, the Council saw reason to hope that the prosperity of the Society would speedily revive.

At the *Conversazione* several rooms were lighted by the Mori-Griffin Electric Lamp. Appliances for increasing the volume of sound in the telephone were exhibited. A collection of etchings formed the special centre of interest, and the proceedings were enlivened at intervals by a Glee Party, while the oxy-hydrogen light was as in former years used for exhibiting photographs.

The Zoological collection of the Museum had received special attention during the Session, the glycerine jelly preparation being used for display of many specimens of fishes. A fine collection of birds was presented by Mr. Clapham. These were described in an interesting Appendix to the Report and the birds and insects cases generally were cleaned and re-labelled.

The Laws were revised and re-enacted May 4th, 1880.

*COUNCIL MINUTES.**April 29th, 1879.*

A request for an allowance on the rent paid for the use of the Lecture Hall for a Lecture on Spiritualism by Mr. Barker was not entertained.

October 9th, 1879.

It was decided to ascertain if Messrs. Beckett & Co. would join this Society in an application to the Highway Committee of the Town Council, to put wooden pavement in Park Row and Bond Street. If Messrs. Beckett were unwilling to join in such application then that this Society apply alone. A note on the original pavement of Leeds Streets is to be found in the Report on Sewerage by J. W. Leather, C.E., 1845, Page 32 :—

‘The earlier system was that called Boulder Pitching. The boulders, after being placed, were covered by a superstratum of ashes. The first improvement was to substitute squared sets, which were cleaner and more lasting.’

ANNUAL REPORT.

1880-81.

At the *Conversazione* Prof. Graham Bell explained his invention of the photophone, and demonstrations were given of the phonoscope. Important exhibitions of photographs and photographic apparatus

illustrated the history of the art. The accommodation provided by the new Gallery in the Zoological Room was this year used for suitable display of reptiles, amphibia, and fishes. A complete manuscript catalogue of the Museum was begun.

The exploration of the fissure at Raygill, near Skipton, being undertaken by the Yorkshire Geological Society, the specimens were deposited in the Society's Museum. The fissure of 8 or 9 feet width was filled with glacial clay, and contained bones of Elephant (*Elephas antiquus*), Hippopotamus, Hyena, Roebuck, Rhinoceros *leptorhinus*, Bear, Lion, *Felis leo* var. *spelœa*, Bison.

An Appendix is added to the Report on the rarer birds in the Milner collection.

Mr. Henry Crowther, for the last six years Assistant Curator in the Museum, left the Society's service in order to take a more remunerative situation.

COUNCIL MINUTES.

April 13th, 1880.

A resolution was adopted that by the death of Dr. Heaton, the Council had lost one of their most zealous and experienced colleagues, and the Society one of its most eminent and useful members. His name was identified with all the most important events of the Society's history during the previous 35 years, and to him were due, in no small measure, its prosperity and growing importance. He read many original papers on scientific subjects at general meetings of the Society. He was President from 1868-1872. Dr. Heaton also unselfishly evinced, in a remarkable degree, an aptitude for the routine and less conspicuous affairs of the Society, on the due conduct of which so much depended.

ANNUAL REPORT.

1881-2.

At the *Conversazione* the chief feature was a collection of artistic metal work from South Kensington, from the Clothworkers' Company, from the Industrial Art School of Nuremberg, from firms in Coventry, London, Leeds, and Birmingham.

Although the Museum was receiving during this decade important donations, the number of persons who paid for admission during this period was gradually being diminished. The schedule at the end of this history gives an interesting curve, but the principles which govern the fluctuation can only be conjectured.

The following announcement is an indication of the far-spread activities of the Society. An important correspondent, Mr. O. H. Furtado, of St. Michael's, Azores, to whom the Society was indebted for specimens illustrative of the Natural History of those islands, was elected an Honorary Member.

The Fossil collections were largely augmented. The Society had assisted in the systematic re-examination of Dowkerbottom Cave, and the wise and patriotic stipulation was made that the objects found should not be finally removed from the county.

The Ethnological Department was enriched by a large and valuable series of weapons, implements, dresses, and ornaments (chiefly Polynesian), collected by the late Mr. H. W. Eyres during a voyage round the world.

The conspicuous ability and success of the Rev. J. H. McCheane in the position of President is recorded in connection with the notice of his much regretted death.

COUNCIL MINUTES.

February 14th, 1882.

A heading appears which is short and eloquent of the position of the Society at the time.

"Canvass of Mayor."

"The President and Vice-President were requested to call upon the Mayor for a donation to the Society."

ANNUAL REPORT.

1882-3.

The *Conversazione* proved of exceptional interest. The most important section of the exhibition dealt with the art of book-making.

COUNCIL MINUTES.

June 7th, 1882.

The Council authorised an advertisement of the Museum at the Midland and Great Northern Railway Stations for £3 a year.

September 21st, 1882.

The Council received the votes of Members and Subscribers as to the hour of the General Meetings:—

"For retaining 7.30 p.m., 73. For 8 p.m., 73.

Satisfied with either hour, 33."

Considering that no preponderance existed in favour of alteration the Council decided to retain the existing hour.

A representative, Mr. Edward Atkinson, was appointed on the Board of Governors of the Yorkshire College.

ANNUAL REPORT.

1883-4.

The Society's building was heated by a new boiler and newly-designed arrangement of pipes. No more modern scheme has been adopted since.

At the *Conversazione* the rooms were lighted by electricity from a dynamo on the premises of Messrs. Marsh, Jones & Cribb, the connection being made by overhead wires over a distance of 300 yards, and carried out by the courteous co-operation of the National Telephone Company.

An interesting series of caricatures was brought together, including original drawings by Leech, Keene, Du Maurier, and other caricaturists. The National Telephone Company and the Yorkshire College exhibited electrical apparatus.

The most important addition to the Museum made during the year was a large and singularly perfect specimen of *Megalichthys*. In 1834 Louis Jean Rudolph Agassiz had visited Leeds and taken the skull, already in the Museum, as the type of his genus *Megalichthys*. A fine example of *Megalichthys* had been discovered at Idle, near Leeds, in the roof of the Halifax Hard Bed. It was extracted with great care and success by the pit-manager, Mr. Andrew Oldroyd, and it was noted with satisfaction by the Council that Mr. Oldroyd had previously attended the Yorkshire College for instruction in Coal Mining. Thus at this date Leeds possessed by far the finest examples of this interesting fossil fish.

A collection of tiles, objects in metal and other details from Kirkstall was received.

ANNUAL REPORT.

1884-5.

Departing somewhat from the usual practice on such occasions, the Council engaged Mr. Henry Blackburn, editor of *Academy Notes*, to give at the Society's *Conversazione* a short account of some of the most noteworthy among recent pictures. His remarks were illustrated by the oxy-hydrogen lantern. The collection of British Birds received special attention during the year. In this depart-

ment the Museum had benefited by the care and knowledge of Mr. W. Eagle Clarke, the Assistant Curator, whose unusual qualifications for ornithological work were well-known. It had long been felt that the stuffed birds required to be supplemented by specimens which could be studied in the hand. The Council therefore placed a large skin-cabinet in the Bird Room, it being hoped that working Naturalists would benefit by changes made expressly to promote their studies.

At the request of the Society representatives of the chief Libraries in Leeds met to discuss in common their lists of scientific serials. The conference led to some saving of superfluous duplicates, and to a proposal of exchange of books between the Leeds Library and the Philosophical Society.

COUNCIL MINUTES.

July 15th, 1884.

A recommendation was received that collections of objects for loan to Elementary Schools should be made.

ANNUAL REPORT.

1885-6.

At the last Annual Meeting the Members desired the Council to consider the expediency of altering the hour of general meetings, and of admitting visitors to lectures on payment of single fees. On the first point the Council deemed it, on the whole, wise to fix the meeting hour at eight, instead of half-past seven, and this alteration appeared to have been welcome to the majority of Members and Subscribers who live in or near the town. To others at a distance, however, the later hour was inconvenient, and the Council had to regret that some resignations had occurred in consequence of the change. The second subject referred to at the Annual Meeting had been fully discussed by the Council, who came to the conclusion that it would not tend either to the strength of the Society or to the advantage of its funds to permit attendance at particular lectures on payment of a separate fee. Members of the Society (whether Proprietary, New Proprietary, Ordinary or New Ordinary), had the privilege of introducing one or two visitors to each meeting, and other persons who desired to obtain a similar right could secure it on easy terms by qualifying as Members.

These two points have been debated often since this date and the hour was moved back to 7.30 in July, 1887. The second point has never reached a discussion at a General Meeting since this date.

At the *Conversazione* a collection of maps, plans, views, books, deeds, and other records and objects to illustrate Old Leeds, with portraits of Old Leeds Worthies, were exhibited. A Catalogue of this collection would be of the greatest interest in 1920 and it is sad to contemplate how many collections are brought together with infinite trouble and how the valuable work of discovery and selection is not carried beyond the actual event for later use.

With a view of making the Museum more useful for popular instruction, and also to giving information upon a variety of local topics, a course of Saturday Afternoon Museum Lectures was held during the Winter. Admission was by the penny paid at the door for entry to the Museum. The attendance at these lectures exceeded the expectations of the Council. There were seven lectures extending from January to March. The use of the lantern is mentioned in connection with the costs of these lectures, and this is the first intimation of the regular use of the lantern at courses or series of lectures.

The Society lost the services of exceptionally valuable members of the Council by the removal from Leeds of the Very Rev. Dr. Gott, Prof. T. E. Thorpe and Prof. A. W. Rücker. Dr. Gott's family were among the founders of the Society, and for three generations have been conspicuous in the generosity and steadfastness of the support they had given it. The Treasurer of the Society at the Centenary was Mr. Frank Gott. Whilst regretting the loss of colleagues holding such distinguished positions in experimental science as Professors Thorpe and Rücker, the Council had the conviction that the impulse which they gave to the local interests of science in Leeds would not soon be lost.

Mr. W. Sykes Ward, who had been Honorary Secretary for 29 years, died during this Session. During this long period the Society underwent revolutionary changes in nearly all aspects of its affairs; its system of lectures had been changed from the original plan of mutual lectures by its members to the practice of depending chiefly upon distinguished men from all parts of the country; the building was treble the size of what it was prior to 1862. Mr. Ward was an early explorer in such fields as telegraphy, atmospheric railways and photography.

ANNUAL REPORT.

1886-7.

The Lecture Hall was this year lighted by electricity. This improved the ventilation which had always been a source of anxious thought. But in spite of this the Council was much concerned by a drop of fifty-seven in the numbers of the various classes of members. The Council questioned if this arose from the change of hour recorded earlier, and reminded the members that when voting took place on the subject the replies shewed a precisely equal vote for each hour.

The Lecture list included the names of Gosse, Dicey, Balfour, Rücker, as well as of extremely capable lecturers resident in Leeds. Mr. Thomas Marshall was one of the most brilliant of Presidents, and the cause of decline must be sought in the increasing distance of the residential districts from the centre of Leeds.

At the same time the number of visitors to the Museum was becoming lower, and the *Conversazione* received less notice.

A live specimen of the Black Rat was exhibited. Down to 1750 the Black Rat was the species common in England and Western Europe, but since that time the brown rat—first observed by Pallas in 1727, on the Volga—had replaced it with great rapidity. A new subject was added to those accepted by the Society as matters for record in relation to meteorology. Observations had been taken for about eight months by “Jordan’s Photographic Sunshine Recorder,” the results being exhibited daily in the window of the Museum. The records of bright sunshine observed at Cliff Road were also shewn, and both series, with a third set of results from Lawnswood, Adel, were published weekly by the newspapers.

*COUNCIL MINUTES.**February 22nd, 1887.*

It was resolved that a Memorial be presented to the Lords of the Treasury in support of an application for an Annual Grant out of the public funds to the Victoria University.

ANNUAL REPORT.

1887-8.

In the Lecture list an evening was devoted to discussion on the “Artificial Formation of Organic Substances.” The attendance was excellent, and there was a general feeling that the three Members (Mr. Sydney Lupton, Prof. Hummel, and Prof. Smithells), who

had undertaken this work, had treated the subject with conspicuous ability and harmony of plan. Their success may have even contributed to check general discussion, as none resulted.

At the *Conversazione* some good examples of home work were shewn in clay modelling, wood carving, repoussé brass and copper, and embossed leather, and prizes were presented for the best work. In addition there was an interesting exhibition of embroidery, lace and needle work, and of home-spun and woven linen. The *Conversazione* was followed at a later date by a Conference on "Home Arts as a Branch of Technical Education," which was arranged by this Society in conjunction with the Leeds Branch of the National Association for the Promotion of Technical Education.

COUNCIL MINUTES.

December 20th, 1887.

The Council considered suggestions as to occupying part of the space in the new Fine Art Gallery, which was being erected by the Corporation, with some of the Society's Collections.

ANNUAL REPORT.

1888-9

The debt of the Society was reduced by the sale of Audubon's "Birds of North America," a work purchased by the Society at the time of its publication. It was a book not suited to public exhibition owing to the risk of injury, and was in no way essential to the Collections as a work of reference. Its sale was authorised by an Extraordinary Meeting of the Society, and it produced the net sum of £213 18s. 0d.

By a re-arrangement made between this Society and the Council of the Yorkshire College of the proportions of duties and of stipends of Professor Miall, the Curator and of the Secretary, Mr. W. F. Husband, who held offices in both Institutions, the Philosophical and Literary Society effected a moderate saving.

A Musical Lecture by Prof. Ernst Pauer on the 18th December was given in place of the usual *Conversazione*.

In the Museum the specimens of Ancient Metal Work were remounted on glass. The extensive collection of Stone Implements was treated in the same way. In accordance with a suggestion from Mr. Teale one case, containing Stone Implements, was altered so as to permit free access of filtered air.

Dr. Allbutt was appointed a Commissioner in Lunacy and shortly afterwards Regius Professor of Medicine at Cambridge University. During many years he had taken an active share in the deliberations of the Council and in the discussions at the Society's meetings. His professional eminence, his strong interest in all questions of education and culture, and his happy way of expressing his opinions gave weight to all his utterances, and it was no formal compliment to say that Dr. Allbutt's absence from the future meetings would be long regretted by all. Dr. Allbutt was subsequently elected an Honorary Member and at the Centenary of the Society, being one of the two who still remained on the list, was good enough to write some of his reminiscences of the Society for this volume, pp. 131-135.

ANNUAL REPORT.

1889-90.

On March 3rd, 1890, Sir Edward Baines, who had been for many years the sole survivor of the founders of the Society, passed away in the ripeness of years. At a Special Meeting, the Council adopted the following resolution :—

“The Council mourn the removal by death, in his 90th year, of their highly esteemed and venerable friend, Sir Edward Baines, D.L., formerly M.P. for Leeds, who was the last surviving founder of the Leeds Philosophical and Literary Society. Sir Edward Baines took part in the meeting held on December 11th, 1818 at which it was decided to organise this Society; He was an active member of its first Council, and retained through life a most cordial interest in its objects and operations.”

COUNCIL MINUTES.

April 30th, 1889.

An arrangement was approved by which the Yorkshire College claimed more of the Secretary's and the Curator's time and undertook to pay a larger proportion of their salaries.

Mr. Edmund Wilson was granted the use of the Library without charge for a meeting to promote the formation of a Leeds Historical Society. At this meeting the Thoresby Society was instituted.

July 16th, 1889.

It was resolved to forward the following Memorandum to the Town Council and to support it by a deputation :—

“The Council of the Leeds Philosophical and Literary Society, having regard to the misgivings as to the effective working of the sanitary organisation of the town, which have been brought to a head by the supposed connection between an outbreak of typhoid fever with the milk supply, would urge upon the town authorities the necessities of a thorough review of the machinery for the protection of the public health in Leeds, and wish to contribute such moral force as they possess to support the Town Council in this work. They suggest that the present occasion of roused public attention should be used to further the following points :—

- (a) To secure, either by voluntary arrangement or by compulsory enactment, more efficient supervision of all sources whence the supply of milk is received for distribution within the borough.
- (b) To make renewed efforts to purify the River Aire and its tributaries, more especially those which run within the borough.
- (c) To provide a more efficient system of cleansing the ash-pits.
- (d) To bring about unity of action of the bodies in the Town Council charged with matters concerning health, so as to avoid the conflict of views and action which now takes place between the Building Clauses Committee, the Sewers Committee, and the Sanitary Committee.
- (e) To secure the prompt and decisive action of responsible officials wherever a strong presumption exists that a source of milk supply is infected.

ANNUAL REPORT.

1890-1.

For the second time the British Association met in Leeds. The Council of the Philosophical and Literary Society, which joined in the invitation to the Association, had much pleasure in placing its Rooms at the disposal of the Local Committee for the preliminary business meetings, and in allowing the use of its Hall and Library by Section B (Chemistry) during the Association week. In addition to the regular lectures, the Society was favoured with an address on the Greek inscriptions in its Museum by the Rev. Canon Hicks, M.A. A description appears in the *Journal of Hellenic Studies* XI. (1890).

The work in the Museum was devoted mainly to the Zoological collection, and in addition to the Marine Shells possessed by the Society, the Conchological Society deposited for a time a fine series of British Land and Fresh-water Shells. The Ethnological collection was catalogued. The most important donation was a



GREEK ROOM. HEAD OF MEDUSA HELD BY HAND OF PERSEUS.



ROMAN ALTAR, WOODNOOK.

Roman Altar dredged up in 1890 at Woodnook, near Castleford, and presented by the Aire and Calder Navigation Company. This interesting local antiquity has been placed in a case in the Greek and Roman Room. The inscription, which is rather defaced in the bottom line, reads as follows :—

DEAE. VIC.
TORIAE .
BRIGANT .
A . D . AURS
FA [?] ORIANU

COUNCIL MINUTES.

June 28th, 1892.

A Committee reported that as the site on which the Bank opposite was built had been bought at £28 per yard, the value of the site of the Society was therefore estimated at £29,400 (1,050 yards) and an offer of £23,000 was considered inadequate.

ANNUAL REPORT.

1891-2.

The Seventy-Second Session of the Society was opened on October 27th by a *Conversazione*, at which nearly four hundred Members, Subscribers, and guests were present. Drawings, Egyptian pottery, and embroidery were exhibited and especial interest was taken in the portraits of Yorkshire Worthies lent by Mr. George Bell.

The manuscript catalogue of the Geological Collections in the Museum was completed and a valuable series of permanent photographs of sections of the coal-measures of Leeds was presented by Mr. F. W. Branson. The sections from which the photographs were taken are no longer visible.

Many species of Lepidoptera were reared during the season, and trout-ova were hatched and kept alive until the yolk-sac was absorbed.

Professor Miall who during a Curatorship of 20 years had raised the Collection to a high position among Provincial Museums, resigned his position and became a Member of the Society and one of the Honorary Curators in Zoology. Mr. E. R. Waite was appointed Curator, which position he held until February, 1893, when he became Assistant Curator in the National Museum, Sydney. Mr. Waite specialised in Birds.

ANNUAL REPORT.

1892-3.

Though during this Session the debt due from the Society for so long had at last been paid off, it was a matter of concern to the Council that this happy result arose from an increase in the somewhat fluctuating and uncertain receipts from the Hall and Library, while the more "reliable" revenue from Annual Subscriptions continued to show a steady decrease.

Mr. Henry Crowther left the Museum at Truro to return to the Society as Curator.

ANNUAL REPORT.

1893-4.

On October 17th, 1893, Mr. W. H. St. John Hope, M.A., lectured on Kirkstall Abbey, its plan and arrangements, and the means being taken to preserve it. The advice of the lecturer had been accepted by the Corporation, and important steps then taken, though actively regretted by many citizens for the destruction of its picturesque appearance, have proved of immense value in preserving the noblest possession of Leeds.

During the Session thirty visits were paid by classes in Biology and Geology of the Yorkshire College; two visits by classes from Board Schools; thirty-four visits by specialists. A case of Flint Implements was specially arranged for twenty-seven University Extension Students from East Leeds, under the direction of the University Lecturer. Selected specimens were lent on ten occasions to the Yorkshire College, on two occasions to University Extension Lecturers, and on three occasions to the Leeds Naturalists' Field Club.

*COUNCIL MINUTES.**April 25th, 1893.*

It was decided that at each lecture particulars should be recorded as to the number of persons present, the state of the weather, and what other important engagements were on the same evening. (There are no records extant as to these particulars).

May 16th, 1893.

An application for the use of the Hall for a meeting of the Legitimation League was considered. It was decided that enquiry should be made into the objects of the League.

May 30th, 1893.

The result of this enquiry was a refusal.

November 28th, 1893.

A question was raised before the Council of taking over from the City certain Natural History Collections and admitting the public free to the Museum.

An offer of £27,000 for the Society's land and building was declined.

ANNUAL REPORT.

1894-5.

During the Christmas Holidays the Curator, Mr. H. Crowther, gave four Lectures on "Monkeys," "Birds which cannot Fly," "Injurious Insects," and "Minerals." The average attendance was about 120, and marked attention was paid to the specimens from the Museum which were subsequently exhibited. Since this date Mr. Crowther has given similar lectures each Christmas to increasing audiences. The use of the Museum for organised visits originated during the previous session was extended.

Mr. Sydney Lupton, who had served as Honorary Secretary for nine years, desired not to be re-appointed Hon. Secretary, to the regret of the Council, who placed on record the value derived by the Society from his distinguished scientific attainments, sound judgment, and excellent business capacity.

COUNCIL MINUTES.

May 22nd, 1894.

A Report was presented by a Committee which had been appointed November 28th, 1893. The reference was to consider a means of extending the usefulness of the Society. The Report was divided into three sections.

A. The property, income and expenditure.

B. The present objects of the Society.

C. Suggestions for increasing its utility.

In A. the average income was taken at £660, expenditure £600. The interest on the value of the freehold property being taken at £1,000 (3 per cent.) it was considered that the Society was carried on at an annual cost of £1,600.

In B. the crowded condition of the Museum and the old-fashioned style of the cases were commented upon.

In C. it was the opinion of the Committee that any scheme for the reorganisation of the Society's works should provide for :—

1. Greatly increased space for collections of various kinds.
2. An adequate Museum staff.
3. A Lecture Hall materially larger than the present one.
4. A smaller Lecture Room and offices for the use of the scientific and antiquarian societies of Leeds and Yorkshire.

The resources for effecting these ends consisted of the Society's collections and such money as might be yielded by the sale of the Philosophical Hall. A division of the collections was recommended between the Corporation and the Yorkshire College.

ANNUAL REPORT.

1895-6.

During the Session a lecture was delivered for the first time in French, by M. du Gillon. Prof. Flinders Petrie who was among the lecturers gave a reading of the labels or straps found when unwrapping the mummy, which showed that it was later in date than that of the coffin. This originally contained the remains of Nesi Amen, a high priest, of the date of Amenhotep III., 1400 B.C. The hieroglyphics on the straps show that the mummy is of the time of Rameses XII., about 1070 B.C.

COUNCIL MINUTES.

April 30th, 1895.

A Committee reported that it would not be to the interest of the Society to dispose of any portion of the collections or books but that a complete rearrangement might solve the difficulties, and the following striking paragraph is added to their recommendation :

“ We have reason to think that more use is made of the Museum and Library for the purpose of study than is sometimes supposed. Outside the class of professed Students, there are persons in every rank of life, Naturalists, Collectors, and others who frequent the Museum and examine its Collections with the definite object of study. We think, therefore, that to a considerable extent the Museum is at present answering its original purpose as a Depository of Instructive Objects for public use.”

June 11th, 1895.

It was decided that the above recommendation be carried out.



GREEK ROOM. TWO HORSES OF QUADRIGA.



GREEK ROOM. TORSO OF RIDER.

ANNUAL REPORT.

1896-7.

By the munificence of the late Lord Savile the Collections were enriched by a large number of objects accumulated by Lord Savile during excavations at Civita Lavinia, the ancient Lanuvium, between 1884 and 1895. The Council acknowledged the great skill and judgment with which the objects had been mounted and arranged by the Curator who acted under the direction of a special Committee, consisting of the President, the Rev. C. Hargrove, Dr. Bodington, Mr. Thos. Marshall, and Dr. Eddison.

The importance and extent of the Collection decided the Council to make a special arrangement for its display, and for this purpose the room hitherto used as an Industrial Museum was selected. This room was cleared of its contents, and into it were placed objects that the Society possessed appropriate to a Museum of Greek and Roman Archaeology.

The most striking objects presented by Lord Savile are the heads and shoulders of four horses, three being originals in marble and the fourth a plaster cast of an original now in the British Museum. The horses are free in their execution and spirited in expression and movement. Along with these are four marble torsos of warriors or outriders clothed with chlamys, lorica and tunic, girt round the waist with fringed girdles, and carrying short swords. There are also many fragments of various portions of the heads and limbs of the horses, saddle-cloths, legs and booted feet of the riders.

A small base of Veined Marble, probably of Republican times, bears the following dedication :—*Q.Labe Q.F.Jovi Beono* (Quintus Laberius, the son of Quintus to Jupiter the good). Other marble objects are small busts of Bacchus, Silenus, various heads, torsos, fragments of bas-reliefs, altars, pilasters, and a roof-tile with an eagle in relief. The numerous objects in terra-cotta, of an archaic Greek character, include a painted female head in an excellent state of preservation, which was the finial ornament masking the end of a ridge of the tiled roof of a temple: Slabs of polychrome terra-cotta, with an ornate frieze from the exterior of a temple. Various votive offerings and a large series of lamps which represent a period extending down to the early Roman Empire.

The pottery, which occupies a central case in the room, consists of fragments, more or less perfect, of Athenian vases, dishes, jars,

unguents and Italo-Greek painted Arretine ware of the period 500-300 B.C. Numerous small undecorated vases of various shapes mostly of later date, and a few fragments of Arretine ware. In other cases are displayed bronze weapons, surgical instruments, nails, lamps, fibulae, rings, hairpins, stili, needles and spoons in ivory, and various objects in lead, iron and glass. The collection of silver and copper coins, over two hundred in number, is chiefly Republican and Roman Imperial, extending from 350 B.C. to the end of the 4th Century A.D.

ANNUAL REPORT.

1897-8.

The Society was now engaged in each succeeding year on the types of work which the extracts from preceding Reports will have made clear. The *Conversazione* had ceased. For two-thirds of the lectures fees were paid to distinguished men from different parts of England, the remainder were delivered by friends and members of Council. But owing to the different conditions of residence, the multiplicity of magazines, of illustrated scientific articles, the attendance was steadily becoming less.

(To avoid repetitions, the extracts from Reports will be confined henceforward to the more remarkable incidents).

The Curator's Christmas Lectures attracted good audiences during the holiday season.

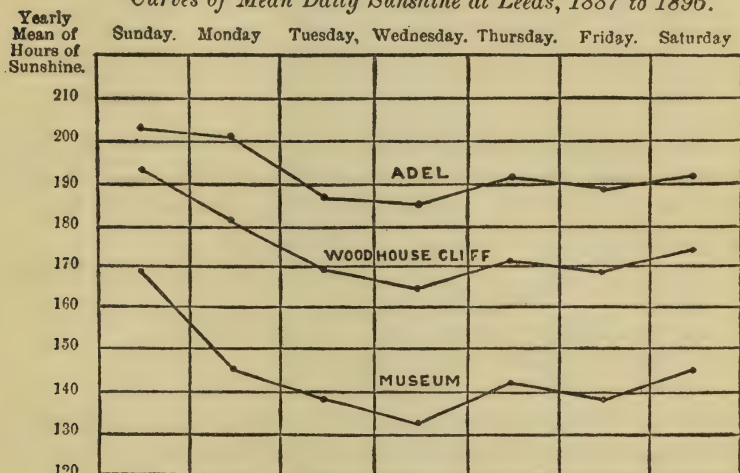
The Museum continued to receive valuable donations and was being used more and more by collectors, undergraduates of the Victoria University, classes of students of the Board Schools, and for some of these visitors special table cases were arranged from time to time to display objects of interest with explanatory labels.

In this year the Society received the sum of £2,000 from Messrs. Wm. Williams, Brown & Co. in consideration of rights of light interfered with by the erection of the new Bank in Park Row.

The report is concluded with a paper by Mr. Henry Crowther and Mr. Richard Reynolds on "A Decade (1887-1897) of Sunshine Observations in Leeds," which was drawn up from the records made during the last ten years, by means of Jordan's sunshine recorders at the Museum, by the Curator; at Cliff Road, Headingley, by Mr. R. Reynolds; and at Lawnswood, Adel, by Mr. C. S. Irvine. The figures given shewed that during this period of ten years on days other than Sundays, of the normal sunshine at Adel, 26.7 per cent. was lost at the Museum, and 10.5 per cent. at the intermediate

station of Woodhouse Cliff. Readers were reminded that while the smoke of manufactories might cease on Sundays, the burning of coal for domestic purposes, and the natural haze of a valley, operated equally through the week. The curves of mean daily sunshine provided cause for further speculation.

Curves of Mean Daily Sunshine at Leeds, 1887 to 1896.



An improvement in the conditions of the town was apparent from the figures :—

Deficiency of Museum from Adel :—

1887-88	..	..	..	24.0	per cent.
1889-90	..	..	..	33.4	„
1891-92	..	..	..	30.5	„
1893-94	..	..	..	20.0	„
1895-96	..	..	..	19.3	„

The Sunshine Records at the Muscum during 1897 shewed a striking improvement in comparison with Adel, the mean deficiency of 1895-96 being 19.3 per cent., that of 1897 16.5 per cent. But during many months of this period a great engineering strike led to the closing of many of the large workshops of the city.

Mr. F. Haverfield, the donor of the Roman milestone from Castleford, gave a description of the stone. A block of sandstone, about five feet long and ten inches in diameter, on it two inscriptions, one at each end. When first erected, in the reign of the Emperor Decius Traianus (A.D. 249-251), it was inscribed with his name and titles. After his death, it was inverted and reinscribed at the other end with the names and titles of his successors, the

conjoint Emperors, Vibius Gallus and Vibius Volusianus (A.D. 251-253).

Inscriptions are as follows :—

(a)	IMPC	and	(b)	IMPP
	CMQ			CCVIBIO
	DECIO			GALLOETCV
	PFNG			VOLVSIA
5	FCM		5	NOPF
	QFRV			AVGG EB
	CO			MPXX

The third, fourth and fifth lines of (a) are indistinct, and there may have been one or two numerals after or below XX (XXI or XXII) at the end of (b). Provisionally, one may expand, thus :—

- (a) Imp (eratore) C(aesare) C. M(essio)
 Q(uinto) Decio P(io) F(elici) Aug(usto) et C. M(essio)
 Q(uinto) Etru[s]co.
- (b) Imp (eratoribus) C(aesaribus) C. Vibio Gallo et
 C. V(ibio) Volusiano p(iis) f(elicibus)
 Aug(ustis), Eb(uraco) m(illia) p(assuum) XX.

The indication of distance from Eburacum (York) is interesting. By the line of the Roman road through Tadcaster and Aberford, the distance from York to Castleford is about twenty English miles. The Itinerary gives twenty-one Roman miles (pp. 475, 478, Wess). The Roman mile was a trifle shorter than the English mile, so that the agreement is fairly close. It would be even closer if it were assumed that this milestone was the twenty-second, and that the twenty-first milestone stood half a mile north of Castleford "station," just as this stands half a mile south. In that case, the actual distance from York to Castleford would have been, by the Roman Road, twenty-one and a half Roman miles.

COUNCIL MINUTES.

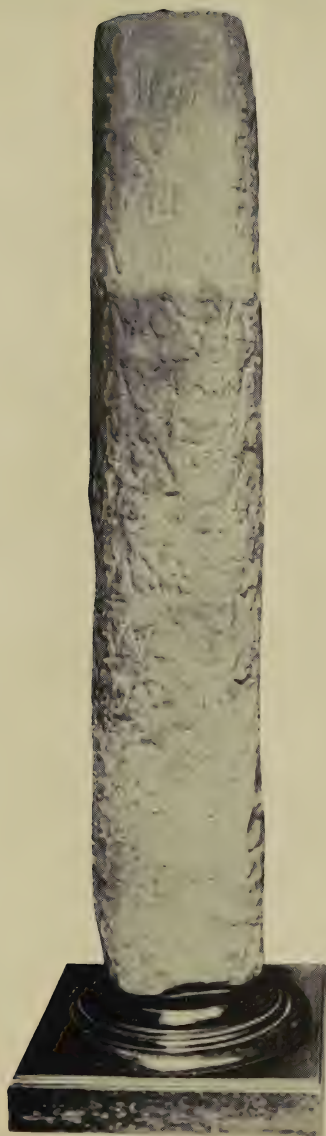
May 18th, 1897.

The Council resolved to support a representation about to be made to the City Council against the proposed demolition of the old Grammar School.

ANNUAL REPORT.

1898-9.

The year saw the housing of the Leeds Photographic Society in the building.



ROMAN MILESTONE.

The death was recorded with respect of the Rev. Thomas Hincks, F.R.S., who had served as President, and in other offices of the Society. Mr. Hincks had taken rank among the foremost Zoologists of his generation.

ANNUAL REPORT.

1899-1900.

Mr. Aquila Dodgson began his extremely valuable work in re-arranging and cataloguing the collection of coins bequeathed principally by Mr. George Baron, of Drewton Manor, in 1854, and supplemented by gifts and purchases.

Mr. W. F. Husband, LL.B., who had been Secretary of the Society since 1876, vacated his office in order to give his whole time to the greatly increased administrative work of the Yorkshire College. The Council recorded their sense of the able and zealous services rendered to the Society for so long a period by Mr. Husband, who had shewn the most vigilant interest in all that concerned the welfare of the Society.

A serious loss was sustained by the death of two Members of Council, Mr. Thomas Scattergood and Mr. Richard Reynolds. Mr. Reynolds as Hon. Secretary gave ungrudgingly of his time and thought to the Society's affairs, and throughout his long connection with it he spared no effort to promote the usefulness and prosperity of the Society and its work. He was himself a diligent meteorological observer, and his registers of sunshine and earth temperatures had long been a feature of the Annual Reports. Neither gentlemen, in spite of invitation, would accept nomination for the position of President. Both were active supporters of the Yorkshire College.

ANNUAL REPORT.

1900-1.

During the past session the change of hour of the Society's lectures from 7.30 p.m. to 8 p.m. which was decided upon in accordance with the votes of a considerable majority of the members, had been carried into effect. The consequence had been a better attendance at the lectures, but there had been also, as an immediate result, a decrease in the number of subscribers. Most of the resignations were stated to be due to the inconvenience of the new lecture hour to those who lived at a distance.

*COUNCIL MINUTES.**June 19th, 1900.*

An application for the use of the Hall for a Meeting of the Women's Peace Committee was refused, as the Council was unwilling to let the Hall for any meeting involving the politics of the war in South Africa.

July 31st, 1900.

The use of the Hall, for the discussion of Martial Law in Cape Colony was refused as it was felt to be contrary to the spirit of the Resolution passed by the Council on June 19th, 1900.

ANNUAL REPORT.

1901-2.

An excellent use was now being made of the contents of the Museum. On the suggestion of the Leeds and District Association of the National Union of Teachers, the sanction of the Council was given to a scheme by which nearly half the children in the higher standards of the Public Elementary Schools of Leeds were brought to the Museum in tri-weekly batches of about 250, under the charge of Teachers and a Supervisor. A lecture, illustrated by lantern slides of objects in the collections, was given by the Curator (Mr. H. Crowther), in the Lecture Theatre, each child being provided with a printed syllabus, giving an outline of the lecture, and a descriptive list of those objects in the collections which had been specially selected and more fully labelled and displayed in glazed cases to which attention should be chiefly directed. At the close of the lecture, the children were taken in sections round the Museum by their teachers, to examine these objects. The children changed from room to room under the charge of their teachers, when the bell of the supervisor was rung.

The Children, after visiting the Museum, were required to write essays, and judging from specimens which were sent to the Curator, some well illustrated by sketches, there was gratifying evidence that the purpose of the visit to the Museum was being fulfilled.

This arrangement has been carried out yearly since that date, so that by the year 1919-20 the total number of children and teachers attending has amounted to 271,000 and the lectures to 1,235. The Council feel that the remarkable success of this scheme is due to the wonderful enthusiasm of Mr. Crowther, to his special attractions as a lecturer, and to the skilful use of the

Collections. It has been a remarkable product of the unselfish devotion of our Curator which has worthily earned the gratitude of the Council and the thanks of the successive relays of the children and the instructors.

The Egypt Exploration Fund generously presented a collection of eighty objects from Mr. MacIver's excavations of 1901, at El Amrah, six miles south of Abydos.

Earl Fitzwilliam, honorary member since 1840, died.

COUNCIL MINUTES.

July 9th, 1901.

A typewriting machine was ordered to be purchased and a Committee appointed for the selection.

ANNUAL REPORT.

1902-3.

In March of 1902 an interesting discovery of Roman Coins was made in Messrs. Pawson Bros. Quarry, at Thorpe-on-the-Hill, near Wakefield. The collection consisted of nineteen silver and bronze coins which were struck under six successive Emperors from Vespasian A.D. 69 to Hadrian A.D. 138. The coins are on loan to the Society by their owner, Mr. Thomas Pawson.

ANNUAL REPORT.

1903-4.

On the retirement of Prof. Smithells from the position of President, the Council recorded their appreciation of the services rendered by him as an Officer of the Society. Since he was elected Honorary Secretary in 1891, not only had he devoted himself constantly to further the interests and continue the traditions of the Society, but he had at different times presented to the members the modern advances made in Chemical and Physical Science. The five lectures for which the Society had to thank him were long remembered; they proved as delightful in expression as they were remarkable in matter.

During the session the Society's building was used as the headquarters of the Annual Meeting of the Institution of Mechanical Engineers. Mr. J. H. Wicksteed, Member of the Council and Past-President of the Society, was President of the Institution, being the first Leeds citizen to occupy that honourable position.

*COUNCIL MINUTES.**February 27th, 1905.*

A Committee appointed April 26th, 1904, presented their Report on the advisability of reconstruction of the Society in view of the desirability of the extension and development of the Society's work. It was stated that the work of the Society could be, and ought to be improved in the following ways amongst others :—

- (a) By building a larger and better Museum, and by rearranging and adding to the Collections.
- (b) By further developing Museum demonstrations and lectures and by making the Collections more generally useful to Students.
- (c) By systematic courses of Lectures by special authorities on Scientific and Literary subjects.
- (d) By making the Society a centre for other kindred Societies in Leeds and this District.

The Committee advised that the present site and buildings be sold and that new buildings be erected elsewhere. The Report was adopted.

ANNUAL REPORT.

1904-5.

On March 30th a communication was received from the University offering a site for the Museum in Woodhouse Lane, and containing several suggestions as a basis for negotiation.

On April 3rd a note which had been agreed upon by the Council, containing the Report of the Committee and the suggestions received from the University had been signed by the President according to instruction and sent out to the Members. The necessary Extraordinary General Meeting was called, but before the date a letter expressed in the following terms was received from the Town Clerk :—

“ 13th April, 1905.

DEAR SIR,

I am requested by the Chairmen of the Property and Art Gallery Committees of the Corporation, in view of the important question which is to be considered by a Meeting of the Proprietary Members of your Society on Monday next, to suggest that before coming to any decision you would give them an opportunity and time to consult their respective Committees and the Council as to whether they would be disposed to consider whether in the mutual interests of the public, the Members of your Society, and the

University, some joint arrangement could be come to between the Representatives of those bodies for making provision for the requirements of each in one comprehensive scheme.

Yours faithfully,

ROBERT E. FOX,
Town Clerk."

The Town Clerk's letter was read at the beginning of each of the Meetings of Members, and the Resolution submitted was carried at both meetings by the necessary majorities.

This Resolution was as follows :—

"To authorise the Trustees of the Society by the direction of the Council of the Society and in exercise of the powers conferred by the Literary and Scientific Institutions Act, 1854 and of any other powers enabling them in that behalf to sell the lands and buildings now vested in the said Trustees and to apply such part of the money arising from such sale as the Council may direct in the purchase of land and erection of buildings or either in the purchase of land or the erection of buildings as the Council may direct to be used for the purposes of the Society AND by the like direction to let portions of the premises not required for the purpose of the Society for such terms and under such covenants and agreements as shall be deemed by the Council to be expedient and apply the rents thereof for the benefit of the Society as the Council may direct AND by the like direction to invest any portion of the money arising from the sale which shall not be required for the purchase of land and erection of buildings or for either of those purposes in the names of the Trustees in any of the Stocks Funds or Securities for the time being authorised for the investment of cash under the control or subject to the order of the High Court and from time to time to vary such investments AND to retain the invested fund until the purposes of the Society require that the money so invested should be laid out in the purchase of land or erection of buildings or either in one way or the other for the purposes of the Trust and in the meantime to apply the income of such investments for the benefit of the Society in such manner as the Council shall direct."

ANNUAL REPORT.

1905-6.

Mrs. Wheatley, of West Hall, near Stanley, kindly allowed a selection to be made of sixty coins from the 7,000 Roman coins found on her land on October 31st, 1905. *at Smalley Right farm*

The subject referred to at length in the last Annual Report was carried on by a meeting between representatives of the Society and the Corporation Committee and the Town Clerk, but the matter went no further.

v. p. 122

*kind loan
Oct 31st
1905*

COUNCIL MINUTES.

April 27th, 1905.

After the Extraordinary Meetings called by order of the Council at their meeting on March 21st, letters of explanation were sent to the Town Clerk and to the Chairman of the Council of the Leeds University.

December 5th, 1905.

An offer of £35,000 for the site was not accepted. Special terms were granted for the use of the Hall for rehearsals of a Chorus about to visit Paris.

ANNUAL REPORT.

1906-7.

A system of lectures on Saturday evenings was inaugurated. To these the public were admitted on payment of the usual nominal fee for entrance to the Museum. For these lectures the Council was indebted to the kindness of three members of the Society.

Mr. Henry Lupton kindly undertook to arrange the splendid collection of Moths and Beetles from Abosso, West Africa, presented the year before by Mr. W. E. Garforth.

COUNCIL MINUTES.

June 12th, 1906.

It was decided that Students and Teachers of named educational institutions be admitted on the same terms as relatives of Members.

January 8th, 1907.

It had been previously decided to open the Museum to the public on Sunday afternoons. But this was now most ably reported on by Mr. Thomas Marshall, and was deferred.

ANNUAL REPORT.

1907-8.

An enquiry was made as to the subject of correspondence between the Society and the Corporation, and a reply received that the matter had been placed before the Property Committee.

COUNCIL MINUTES.

December 17th, 1907.

A special letter was sent out embodying an appeal for further subscribers. In this the functions of the Society were described and a statement included of the relation of annual average income, £640, to expenditure, £700.

ANNUAL REPORT.

1908-9.

An important donation was made of a skeleton of a woman found in Scoska Cave, Littondale, by members of the Yorkshire Ramblers' Club. The skeleton was ascribed to the termination of the Bronze Age.

*COUNCIL MINUTES.**June 16th, 1908.*

The number of votes received for fixing the lecture hour at 5.30 p.m. was 94, for 8 p.m. 109.

March 16th, 1909.

The Hall was let to the National Women's Social and Political Union on condition that that Union should provide at their expense police to protect the cases of the Museum.

(NOTE—Votes were given to Women in February, 1918.)

*COUNCIL MINUTES.**April 27th, 1909.*

A scheme for modifying the Constitution of the Society and the simplification of the classes of Membership was discussed in a letter from the President. In this letter it was recorded that as a result of the letter to possible supporters dated 7/12/07, one additional subscriber had been enrolled.

May 11th, 1909.

Mr. Marshall had reported fully on the proposals brought forward as above—in the sense that any change in the direction suggested would have to be prefaced by the dissolution of the Society.

ANNUAL REPORT.

1909-10.

A lecture by Professor Kendall on "The Meanwood Valley" was followed by an outdoor demonstration on "The Physiography of Meanwood Valley," in which about fifty members took part.

By means of the sympathetic co-operation of the University an important addition was made to the lecture list for the Session of 1909-10. Certain lectures by members of the Staff of the University which had been previously open to the public by payment of a fee were free to Members and Subscribers of the Society

upon presentation of their Sessional card. These lectures were combined with, and added to, the Society's usual list, and were most successful in attracting the attention of good audiences. By this means the sessional list was extended to 28 lectures.

The death of Mr. Thomas Marshall deprived the Society of a member whose attractive personality filled his brilliant lectures with the spirit of his own charm and his own humour. His loss was the cause of personal sorrow to all the members of the Society, and especially to his fellow members of Council.

ANNUAL REPORT.

1910-11.

The arrangement by which members of the University Staff delivered lectures in co-operation with the Society was continued with most satisfactory results. The lectures were divided into three series, and added 15 to the usual list.

Mr. Aquila Dodgson, in addition to his work on the coins furnished the Annual Report with a most interesting account of the clay moulds which have been in the possession of the Society since 1829. He added an admirable description of other finds and the theories connected with them. A valuable Collection of birds was received from Mr. and Mrs. Eyres-Monsell, and described by Dr. F. H. H. Guillemard, the author of "The Cruise of the Marchesa," who wrote as follows:—

"This collection is well known to ornithologists as part of the Marchesa Collection made in 1882-4 during the long cruise of that yacht in Malay and Papuan waters, where her owner, Mr. Charles Thomas Eyres, uncle of Mrs. Eyres-Monsell, with Dr. Guillemard, as naturalist, obtained the largest number of birds ever brought back from this region to Europe as a single collection." (*Proceedings of the Zoological Society*, 1885).

As the Museum already possessed the collection of Ethnological objects acquired by the late Mr. H. W. Eyres during his travels, which were presented by his Executors some years ago, the present gift increased the deep indebtedness of the Society to the family for their interest in its Museum.

ANNUAL REPORT.

1911-12.

In addition to the sessional series there were six lectures delivered by members of the University Staff and the Rev. W. H. Draper

gave a course under the University Extension scheme, members and subscribers being admitted on special terms. The Society lost by death the valued services of Sir Nathan Bodington, the Vice-Chancellor of the University of Leeds—a most active member—to whom the Society had been indebted for lectures, for special help and advice about lectures, and for obtaining gifts to its Museum. The Museum proved of constantly increasing value. Students of the Medical School, of the Art School, teachers and scholars from schools outside the Leeds district, merchants whose goods suffered from destructive insects, coin collectors, used the resources of the Society, as many as one thousand enquiries being received in a year.

ANNUAL REPORT.

1912-13.

During this Session a change was introduced with regard to the hours of meeting, the usual lectures before Christmas being timed for 5.15 p.m., after Christmas for 8 p.m. This change was made to meet the strongly expressed wishes of many Members of the Society, but it was felt that the later hour had been so long the practice that a compromise was desirable as an experiment. The Council and Officers ventured, therefore, to hope that all Members of the Society would help them to make the Session a success. It was added that at this date Philosophical Societies in many towns had reached a difficult stage in their careers, but it was to be hoped that by adapting itself to the changed conditions of residence and times of leisure, this Society might increase the valuable work for which it was well known in the past.

The earlier hour also furnished an opportunity for the Members of the Council and of the Society to meet in the Library at tea before the lecture, but the experiment was discouraging.

Nine additional lectures were delivered by Members of the Leeds University also six University Extension Lectures in co-operation with the Yorkshire Ladies Council of Education.

The Saturday evening lectures were increased to five in number. These latter were now proving a very satisfactory feature of the Society's work, while the Curator's Christmas lectures secured a like success, yet the papers belonging to the traditional sessional series were now failing to attract such audiences as their quality merited.

ANNUAL REPORT.

1913-14.

The original time for lectures, 7.30 p.m., was replaced. There was an improved attendance. The Evening lectures delivered before the Members of the Society by Members of the staff of the University were discontinued owing to the insufficient attendance of Members.

On seven Saturday mornings Prof. Garstang delivered a course of lectures on Natural History. Prof. Grant gave a course of University Extension Lectures. Both series were remarkably successful.

Mr. W. H. Bartholomew presented a valuable and perfect Bronze Halbert with its three rivets intact (period B.C. 1300-1000). It had been found at a depth of 26 feet at Woodnook, Altofts, in 1842 in a layer of sand, with pieces of black oak lying right above it. (Proc. Yorkshire Geological and Polytechnic Society, Vol. III., page 654). Later he made a further most acceptable gift of eleven finely-preserved bronze objects, "which were dredged up some years before from a gravel bed in the River Calder, a short distance below Smalley Bight, near Stanley Ferry." The objects consisted of a flanged celt, a palstave, seven looped socketed celts, a socketed celt without a loop and a bronze object with a bearded man's head on it.

A loan collection of examples of Old Leeds Pottery in the possession of Members and friends of the Society was made and arranged in the Library, and was on exhibition for over a month. The objects were described by Mr. A. J. Sanders in one of the sessional lectures and by Mr. Francis J. Kidson at a Saturday evening meeting. The Society had to thank Mr. R. Wilson, Hon. Treasurer, for the loan of ninety-eight pieces.

Under the direction of Mr. Reginald A. Smith, Assistant Keeper of the British and Mediaeval Antiquities, British Museum, the collection of prehistoric implements and pottery, and of classical pottery, glass and bronze objects, on the Grand Staircase Landing was classified according to periods. The sections are as follows :—

Stone Age of Egypt ..	..	Palaeolithic.
Stone Age of Scandinavia ..	..	Neolithic.
Early Stone Age of Europe ..	..	Palaeolithic from Drift or river gravels of the Cave period.
Stone Age of Yorkshire ..	..	Neolithic.
Swiss Lake Dwellings ..	..	Neolithic or Bronze periods from pile dwellings.

Bronze Age of Britain	.. Development of axe head, B.C. 2000-500.
Early Iron Age or Late Keltic	
Roman Britain .. ..	.. Pottery A.D. 43-410.
Period of Classical Pottery.	
Anglo-Saxon .. ..	.. A.D. 500-650.

COUNCIL MINUTES.

December 13th, 1913.

It was reported that the District Valuer estimated the site of the Society's premises as worth £40,000. A collection of Leeds Pottery was arranged for during the ensuing year.

ANNUAL REPORT.

1914-15.

The great War broke out on August 4th, 1914, and the effect was to be seen in the lecture list. "The Poetry of Patriotism" by Mr. J. R. Mozley, "The Doctrine that Might is Right, and the Idea of the Superman," by Prof. C. M. Gillespie. Lieut.-Col. E. A. Hirst, R.F.A. (T.F.) and Capt. P. W. Dodd, 2/6 West Yorks., were prevented by military duty from lecturing.

A special series of lectures by Prof. Garstang on the Story of Sea Mammals was much appreciated.

During the year the Society lost by death Col. E. Wilson and the Rev. J. H. D. Matthews, M.A., two former Presidents of the Society. Col. Wilson had been President 1896-7 and 1897-8. His paper on "Slums" was one of the factors which influenced public opinion as to the dangers of the insanitary property in Leeds. The citizens of Leeds should ever hold him in grateful remembrance for the part he played in securing the transference of Kirkstall Abbey to the citizens of Leeds by Col. North.

On the invitation of the Council, and thanks to the influence of the Lord Mayor, Mr. J. E. Bedford, a member of Council, four of the Heads of Departments of the Leeds Corporation undertook to deliver a course of lectures on "The Municipal Undertakings of the Leeds Corporation." The subjects were as follows:—"Water Supply," "Sewage Disposal," "Town Planning," "Public Health."

A small charge for admission was made to the general public to cover incidental expenses and advertising. The lectures were well attended and aroused considerable interest. The thanks of the Society were due to Mr. C. G. Henzell, Mr. G. A. Hart, Mr. W. T. Lancashire, and Dr. Angus for their valuable papers.

Towards the end of the Session the President and Council made arrangements for three Discussions on "Some of the Philosophical Aspects of Religion." At each of the Discussions there were three invited speakers, one of whom, by a special paper, introduced the subject and was followed by the two other speakers who gave their views from their own standpoints. The meeting was then declared open for discussion by Members and their friends. The President acted as chairman and closed each discussion with a general survey of the subject before the meeting. The attendances were excellent and the discussions evoked much interest.

One of the Honorary Secretaries, Lt.-Col. E. Kitson Clark, being on duty with his Battalion, 8th West Yorkshire Regiment, Leeds Rifles, and afterwards in France, and the Hon. Curator in Ethnology and Works of Art, Capt. S. D. Kitson (Yorks. Hussars) were absent from the meetings during the Session.

The Prehistoric collection of flints was augmented by valuable gifts from the Trustees of the British Museum, palaeoliths from Swanscomb, Kent, from the Associated Portland Cement Manufacturers palaeoliths from Northfleet, from Sir Hercules Read, Keeper of British and Mediaeval Antiquities, British Museum, palaeoliths from the Dordogne Caves.

Members of the Council subscribed to the Prehistoric Society of East Anglia for the exploration of the workings at Grime's Graves, Norfolk, and the Museum received a series of forty-two prehistoric objects, including worked flints, antlers of red deer, and a series of the shells of twenty species of land molluscs.

NOTE.—The Prehistoric Flint-Mines, Grime's Graves, Weeting, Norfolk, consist of about four hundred filled-in shafts originally sunk in the chalk to a depth of from thirty to forty feet. When the desired fine layer of flint known as floorstone was reached it was followed up by means of low galleries, of which there is an intricate network beneath the whole area.

Mr. J. E. Bedford presented a finely preserved series of Graptolites and Trilobites chiefly from the Ordovician of Llandilo.

Mr. Edwin Hawkesworth, Member of Council, who had for some years made gifts of geological objects to the Museum, presented specimens from the East Coast of Yorkshire of varied and interesting types of fossils, and also of two series of fossils from the Yorkshire Coalfield of special interest.

The temporary use of the office part of the Basement of the Hall was granted to Mrs. Kitson Clark for providing clothing for the 8th Battalion W.Y.R. and for other objects connected with men serving in the war.

ANNUAL REPORT.

1915-16.

There were no fees given for lectures in the Session, and Miss Grier, acting head of the Department of Economics in the University of Leeds delivered a course of six lectures which were well attended and provoked good discussions.

The Session witnessed a revival of the *Conversazione*, which had been an important event thirty years before. The Lord Mayor and Lady Mayoress of Leeds (Mr. and Mrs. J. E. Bedford) kindly invited all the Members and Subscribers of the Society and there was a large gathering.

Batches of convalescent soldiers from the hospitals at Roundhay, Gledhow, Cookridge, Temple Newsam and Swillington, were invited to the Museum.

The Society was insured against damage by aircraft in 1915 at a cost of £18 ls. 0d. ; amount insured, £19,000.

ANNUAL REPORT.

1916-17.

The attendance at the sessional lectures was now becoming seriously diminished. On the Saturday evenings and at the Curator's Christmas Lectures it was satisfactory.

At a meeting of the Members of the Society, on November 7th, it was agreed that in addition to the privilege of free admission offered to invalid soldiers who might desire to visit the Museum, arrangements should be made to invite convalescent men from the hospitals every week and offer them special hospitality. A small Committee was appointed to carry out the wishes of the members, and Mrs. Walter Garstang undertook the arrangement.

The following objects were exhibited in table cases in the Inner Vestibule :—shells, incendiary bombs, gas masks, grenades, helmets, bayonets, &c.

Insurance against aircraft, £9 10s. 0d. ; amount insured, £19,000.

The premium was reduced as it had been proved by experience the German Zeppelins were unable to find Leeds at night, being misled it is supposed by the course of the rivers. The nearest bombs were dropped at Harewood.

ANNUAL REPORT.

1917-18.

The President, Mr. J. E. Bedford, and Mrs. Bedford, invited the Members and friends of the Society to meet them on the evening of November 6th, at a *Conversazione*.

Thirty-eight receptions, with tea and lectures, were arranged for wounded soldiers, and the cost was defrayed by subscription. On these occasions different ladies connected with the Society acted as hostesses. The difficulty in obtaining provisions in this period of rationed food deserves record, and as a result the number of soldiers eventually had to be restricted to one hundred each week.

In view of opinions expressed at the Annual Meeting of Members on May 15th, 1917, the Council arranged for a Kinetograph to be installed in the Lecture Hall for the fuller illustration of Lectures.

During the Session the Council agreed that an historical volume of the work of the Society be issued in 1920, on the completion of the 100th year of the Society's work, and that Lt.-Col. E. Kitson Clark, Hon. Secretary of the Society since 1895, be asked to write such a Volume.

The effect of the war upon the supply of materials for making paper is very notable in the inferior class of paper upon which the Report for 1917-18 is printed.

The insurance against Aircraft was £9 0s. 6d.

ANNUAL REPORT.

1918-19.

At 11 a.m. on the 11th day of the 11th month of the year 1918, the Armistice was signed. A *Conversazione* was held on the evening of the 12th November, to which the President, Mr. J. E. Bedford and Mrs. Bedford again generously invited the Members and friends of the Society.

In the Museum were displayed the many objects presented by the President during the past year. Films of travel were displayed by the Kinetograph in the Lecture Theatre.

Mr. Richard Wilson, Hon. Treasurer, Mr. Sydney Lupton, a former Hon. Secretary, and Dr. C. Hargrove, a Past-President, died during the session. The two latter had assisted the Society's work in previous years by scholarly lectures.

Twenty-seven receptions were given to wounded soldiers.

Of the Members and Subscribers who served in the War there were :—

NAVY.		ARMY.		MUNITIONS.	Y.M.C.A.		OTHER WAR SERVICE.
Foreign.	Home.	Foreign.	Home.		Foreign.	Home.	
2	—	2	10	2	1	1	8

One Member was killed.

A conference was held with representatives of the City Council and of the University and the subjects referred to in the 85th Annual Report, 1904-1905, were further discussed with a view to possible action in the future.

COUNCIL MINUTES.

December 2nd, 1918.

Negotiations with Mr. Charles Lupton, for the sale of the site and buildings were carried on, the reserve price ^{the} being stated at £55,000.

ANNUAL REPORT.

1919-20.

The initial General Meeting of the 100th Session was marked by the first of all pronouncements of the important deductions from observations of the Solar Eclipse of 1919. As Dr. Crommelin's Lecture dealt with the Einstein Theory, which has since received so much notice, his own notes on his Lecture are reprinted here :—

THE ECLIPSE EXPEDITIONS OF MAY, 1919.

“The two British Expeditions that went respectively to Sobral in Brazil and to Principe Island, had for their object the settlement of the question whether rays of light in their passage across space are subject to deflection by the force of gravitation ; if so, whether the deflection follows the Newtonian Law, which would give a shift of 0.87" at the sun's limb, or that indicated by the new law of gravitation put forward by Einstein in 1915, which would give a shift just twice as great. In either case the shift is inversely proportional to the distance from the sun's centre ; hence it is necessary to photograph stars as near the sun as possible. In the Eclipse of last May there were twelve fairly bright stars within a degree or so of the sun, so that the opportunity was very favourable. Unfortunately the larger camera at Sobral did not give satisfactory results, the Eclipse plates being badly out of focus, owing probably to the effect of the sun's heat on the mirror of the coelostat used to reflect light into the camera.

But the other camera, which was lent by the Royal Irish Academy, gave very satisfactory images of seven stars. Check plates of the same stars were taken seven weeks later, when the sun had moved away.

When the Eclipse plates were compared with the check ones, it was found that the star images on the former were pushed outwards from the sun by an amount in close accord with that indicated by Einstein's Law. The Principe observers, though much hampered by cloud, obtained a similar result. This agreement, combined with Einstein's success in explaining the anomalous motion of the perihelion of Mercury, has convinced many astronomers that his gravitational law is sound, in spite of the fact that his prediction of the shift towards the red of the lines in the sun's spectrum has not been confirmed by observation.

In practice the new law will give results very nearly the same as the Newtonian one; the few cases where the differences are sensible had been already rectified by the application of empirical corrections in Newcomb's Tables. But in the region of philosophy the change is very important. It gives new conceptions of time, space and mass, which are seen to be mutually dependent in a manner previously unsuspected. Einstein's full theory involves a curved space which does not extend to infinity, but re-enters into itself. It therefore implies that our familiar Euclidian geometry is not strictly true, though the error is quite inappreciable in all ordinary cases."

Among the Members who died in this year was Mr. J. H. Wicksteed, who had been President in 1900-1, 1901-2, and whose father, the Rev. C. Wicksteed, had held the same position in 1850-1854.

In the course of this year various possible forms of agreement as to the relation of the Society and the City Council were subjects of serious and prolonged discussions by the Council, during which they have had the advice of their Solicitor. It was eventually decided by the Council to submit certain terms under which a transfer might be made to the Corporation of Leeds. The necessary Meetings were held on March 16th, 1920, but the statutory majorities required for such a course of action were not secured.

COUNCIL MEETINGS.

During 1918 and 1919 many Council Meetings were held to consider the proposed arrangements with the Leeds Corporation on the subject of a transfer, and it will be in accordance with the wish of all Members of Council that a record should be made of the indebtedness of Members of both Council and Society to Mr. Sydney Kitson, the President.

The solution of all the different problems, the satisfaction of all the different interests, the agreement of all the different advisors, presented difficulties which were only overcome by the unbiassed,

sagacious, and good-humoured leading of so able a Chairman and President.

ANNUAL REPORT.

1920-1921.

The Lecture which opened the Second Century of the Society's work was devoted to the description of the Optophone, a new invention designed by two former members of the Society, Dr. Stroud and Dr. Barr, to promote the happiness of the blind.

The situation which had arisen out of the negotiations referred to in the last Annual Report was still receiving the close attention of the Council in connection with its Solicitor.

ANNUAL REPORT.—102nd SESSION.

During this year the transfer of the Society's Museum to the Corporation of the City of Leeds was effected and at a Meeting of the Council of the Society held on November 8th, 1921, the resolution of the Transfer passed by the Old Society on the 29th July, 1921, was confirmed. The Society ceased then to exist under its old style and became The Leeds Philosophical and Literary Society, Ltd. The terms of transfer are described shortly in an Appendix.

This fine old Society may be said, therefore, to have carried its first Centenary forward to its 102nd year of life, and concluded this Series of Lectures by the happy combination of the Modern Kinematograph with a representation of the Ancient Trilogy "The Oresteia of Aeschylus."

The Society has now transferred the valuable possessions, over which it has stood guardian for so many years, to the keeping of the citizens of its own town. Furthermore it has realised an income by which it is in a position to develop the productive work for which it was originally founded. The connection between the revived and the Old Society is fortunately as close as it possibly can be made, and no better words can be found to close this History of its first period than the names of those who have dignified the New Society by becoming Honorary Members :—

Sir Thomas Edward Thorp.

Sir T. Clifford Allbutt.

Dr. J. E. Eddison.

Dr. T. P. Teale.

CHAPTER V.

PERSONAL REMINISCENCES.

DR. THOMAS PRIDGIN TEALE, M.A., F.R.S.

18/3/1919.

In connection with the Society, my recollections are chiefly three.

1. Denny. 1825-1871

2. O'Callaghan.

3 My father's work on the bones of extinct mammals found in "The Aire Valley Deposit."

1.—DENNY.

He was virtually the Philosophical Hall Museum. I remember as a boy going with my father as a great treat into the yards, now built over, at the back of the Philosophical Hall, to see Denny's treasures in preparation, rare skeletons, etc. Denny had a wonderful instinct for scenting out fatalities of valuable animals in travelling menageries, and still further in scenting out good friends to subscribe and purchase these "fatalities."

Many of the most striking specimens of mammalia and other animals were acquired in this way. Another phase of Denny's character. Meeting a gentlemen, owner of some valuable collection or specimen, "Excuse my asking you, have you made your will?" "Why do you ask?" "Well, have you left so and so to the Philosophical Museum?"

2.—O'CALLAGHAN.

A very remarkable character. His first introduction to Leeds was, I believe, as Surgeon to a Cavalry Regiment quartered in Leeds. At that time an Army Doctor was of little account. Not so O'Callaghan. He was already a personality in the Regiment, and inspired his brother officers with an interest in Science and Medicine, and in the Infirmary and Medical School. So much so that my Father told me that he and his Colonel (Chatterton?) and some brother officers would come to hear him lecture (on Anatomy?) at the School of Medicine in East Parade.

About this time he married the widow of John Marshall, retired from the Army and settled in Leeds, at Cookridge Hall. Then his personality began to assert itself in Leeds, for which, with his widespread interest as a collector of autographs and in science

generally, his election as an Hon. Secretary of the Society gave him his opportunity. His son is the distinguished Artillery Officer—Major General Sir Desmond O'Callaghan, K.C.V.O.

3.—MY FATHER'S WORK ON THE BONES OF EXTINCT MAMMALS FOUND IN THE AIRE VALLEY DEPOSIT.

In 1854 Mr. Denny heard of some large bones being found in a brick field near Armley Gaol, in a bed of supposed Glacial Clay. He secured all the bones which the workmen could produce, and he identified them as Elephantine, Hippopotamic, and Bovine, all of extinct species.

My father, as Hon. Curator, set to work to study the specimens and the clay deposit in which the bones were found. In order to form an opinion as to the geological age of the deposit of this clay, and its relation to the Glacial Periods, he visited numerous cuttings and deposits of clay within several miles of Leeds, which were being worked as brick fields and otherwise. In these investigations I used to accompany him during my summer medical vacations, selecting at each place specimens of boulders and rolled stones for identification.

The results of these studies led my father to propound and publish the opinion, then looked upon as geological heresy, but now accepted as geological doctrine, "that the great extinct pachyderms, Elephants, Hippopotami, etc., had survived the Glacial Period in these Islands and had been coeval with Prehistoric men."

SIR T. CLIFFORD ALLBUTT, K.C.B., M.M., F.R.S.

The invitation to write some recollections of past times in this Society, the oldest Philosophical Society in Yorkshire, awakened in me many memories, memories still alive but slumbering. I must have joined the Society soon after my settlement in Leeds, for I appear on the Council in 1861-2. The Society was then confined to its old and narrow buildings on a part only of its present site. The General Infirmary also was then in its old and squalid quarters, and the Leeds School of Medicine likewise occupied a ramshackle house or two in East Parade. These Institutions soon afterwards found homes more worthy of them.

When I joined the Council of the Philosophical Society my kind friend Mr. Thomas Teale, F.R.S., was President and Curator of the

Mammalian Collections of its Museum ; a post in which I unworthily followed him. He had made it easy for me. The rest of the Zoological Collection was under the charge of the Rev. Thos. Hincks, F.L.S., then Vice-President, for many years one of the most learned and influential members of the Society and President 1862-65. Mr. Hincks was a man of delicate but strikingly intellectual features and of high reputation for his researches on the "British Marine Polyzoa and the "British Hydroid Zoophytes," a study in which he was associated with Mr. George Busk, Brother-in-Law of Mr. Darnton Lupton. Unfortunately Mr. Hincks, whose health was very poor, had to retire prematurely from active life. Mr. Teale, Mr. William Hey having then retired from practice, was at the head of the great surgical school of Leeds, and one of the most eminent surgeons of the day, a position in which his son, still happily with us, followed him with no less distinction. Yet notwithstanding his extensive practice, in and beyond the three Ridings, he found time—as busy men do—to design and superintend the re-arrangement of the Mammalian series in the new building, and moreover to do this on a plan of "continuous survey" on which he was warmly congratulated by the venerable Professor Owen in his Opening Address. Owen said that "no such unbroken serial exposition of the Mammalian Class was to be found elsewhere in England." Professor Huxley, who visited us a little later, expressed the same opinion.

When I first joined the Council the enterprise of the new building was already in hand ; and thus I had the only too fleeting privilege of acquaintance with Mr. William Gott, of Wyther Grange, the Chairman of the Building Committee. Mr. W. Gott presented to the Society the great tiger, from the International Exhibition of 1862, which still ornaments the Zoological Museum. Prof. Owen considered it unequalled as a specimen in size and of taxidermy. And at his house of Wyther and in the atmosphere of its celebrated library began my friendships with the Rev. John, afterwards Bishop Gott and Mrs. Gott, friendships which were broken only by death. Mr. William Gott was a tall graceful man, highly accomplished and of singularly refined and kindly countenance. Thus he was an invaluable leader in the social and public life of the town. Too well do I recall the dismay which fell upon us at a Council Meeting when the news of his almost sudden death was announced. The loss was irreparable, but happily we had on the Building Committee

at least two men of like ascendancy and public spirit—Mr. Arthur Lupton and Mr. John Rhodes who, with their colleagues, carried the work of rebuilding to completion. Mr. Rhodes is not yet forgotten as one of the most generous and capable citizens of Leeds of that time; Mr. Arthur Lupton and his brother Darnton, whose labours were mainly in other fields, were in their generation pre-eminent for strength of purpose, integrity, and devotion to public service.

Indeed Leeds at that time was rich in citizens still unforgotten, who merited well of the community. Of those concerned with this Society whose names come first to memory are Dr. Heaton, then Librarian, President 1869-70, Messrs. William and Samuel Hey, Dr. Atlay, afterwards Bishop of Hereford, Vice-President 1861-68, the genial T. W. Stansfeld, Dr. Chadwick, afterwards President (1865-6), Mr. (afterwards Sir A.) Fairbairn, Mr. Thomas Marshall, President 1886-9, a loyal and hardworking member of Council and dear friend of whom I would gladly say much more, Mr. J. Garth Marshall, who greatly enriched the Geological Collections of which he was Hon. Curator, Rev. A. Barry (Vice-President 1860-61) afterwards Bishop; these of the men of that time stand out vividly in my remembrance, and many of them in intimate affection.

In respect of the Hon. Secretaries I must dwell a little more on one of them, Mr. O'Callaghan, who had married the widow of Mr. John Marshall, of Cookridge Hall, and came to live near Leeds shortly before my arrival. O'Callaghan was a fine looking and able man, formerly a surgeon in the Army, in which calling he had developed a keen love for science and history. He had contributed papers on Irish antiquities and the like, and had a fine collection of autographs. Moreover, he had a large acquaintance with distinguished men of science, and on his election as Hon. Secretary in 1860-1 he initiated a new course of action which gave rise to some controversy; and like all reformers he had his friends and his opponents. He regarded the Society as becoming torpid and provincial, and set himself to invite leaders in science and history of the day to visit and address the Society. In this mission he was very successful, as may be seen in the long series of names of illustrious savants on the Lecture Lists of the period. No doubt in this way much was done to widen the outlook and arouse the intellectual energy of the Society in the time before the foundation

of the University. On the other hand, it was said with no less truth that these convocations threw into the shade the homely attempts of native scientists in the Society to interchange ideas, and to compare observations and specimens. However, to meet this disadvantage some of us founded the subordinate Priestley Club for a more intimate reading of papers, a Society which still flourishes.

When Mr. O'Callaghan left Leeds he was succeeded in his Secretaryship in the Session 1863-4 by Mr. Thomas Wilson, for many years afterwards an active Hon. Secretary of the Society; with whom later Mr. Richard Reynolds began the many useful years of his administration. Mr. Wilson, who was Secretary of the Aire and Calder Canal, was also a man of considerable literary and scientific attainments. He was an active member of the Leeds Library Committee and for many years Secretary of the Conversation Club.

Among the visitors and patrons of our Museum at that time I may mention two well-known Yorkshiremen—Charles Waterton, of Walton Hall, the naturalist and traveller, and Edward Hailstone, antiquary and omnivorous collector, then of Horton Hall, who afterwards followed Waterton at Walton. Waterton, on my coming to Leeds was, I think, already an octogenarian, and so visited us in Leeds more rarely; but on the kind introduction of my old friend the picturesque Leeds physician and fine horseman, Dr. Hobson, I often visited Waterton at Walton, and saw him still active both in mind and body, and brimming over with wit and humour both in word and craft. His Museum was then full of grotesques, constructions of fancy animals designed with extraordinary and curious skill as caricatures of characters whom he abhorred, such, for instance, as poor Martin Luther. His son Edmund was the owner of a well-known and probably unique cabinet of rings, on which he gave a Lecture and demonstration in the Society's Hall. The burly and jovial figure of my old friend, Hailstone, often decorated with antique jewellery, was more often seen among us.

Of our fellow-workers I have left to the last one, by no means the least, only for the better opportunity of celebrating his memory—Henry Denny, A.L.S., for many years the centre and life of the Society. Mr. Denny was an example of those choice, if happily not very rare men of science, found especially in Museums, who

are full of varied knowledge and careful delights ; ardent researchers and insatiable collectors, and full indeed of everything but themselves. The only subject of which Henry Denny was ignorant was of his own merits and his own claims to recognition and honour. I fear now that, as is usual in such cases, we took much advantage of his own valuation. Under such simple titles as "Sub-Curator," "Assistant Secretary," &c., he devoted his whole life—I had almost said soul and body—to the custody and enrichment of the possessions of the Society. Many of the finest donations to the Museum were due to the early information, vigilance, and canvass of the "Sub-Curator." The greatest affliction of Denny's serene life was, I believe, his discovery, after the departure of a well-known numismatist, that the chief coin of the fine collection of the Society—a coin almost or quite unique, and the pride of his eye—was missing. On one subject—on creatures of a kind as vicious and malignant as their observer was gentle and benign—he was the first authority of his day ; namely, on the Louse. To procure specimens of its peculiar louse from rare beast or wildfowl was in Denny's eyes the crown of the career of a foreign Minister or Missionary. No doubt his blameless labours have been invaluable to the present day students of military medicine. Dear old Denny ! I cannot imagine the Philosophical Hall unpeopled by your gentle enthusiasms. Perhaps you have found your reward in the love of all who knew you. May you rest in peace.

In the new building the collections were not only enlarged on the original lines but an Industrial Collection also was commenced under the Chairmanship of Mr. Darnton Lupton, in the Session 1863-4, and from that time Loan Collections were received from time to time from the National Centres. Gradually the attendances on the Lectures began to flag a little because of a disposition of its wealthier members to desert the gaiety and discourse of the town for the pastoral simplicity of the country. Men who had made their way home in the evening from the city forgot its charm, and their own intellectual curiosity, in the comforts of a far fireside. And here my little story comes to an end, with the advent of Professors Bodington, Rücker, and Thorpe, with the virtual establishment of the University of Leeds. A far greater and more potent organ of intellectual growth was now afforded to Leeds and the County, and from that time our Philosophical Society was no longer the leader of that growth, though still, especially by its Museum, its indispensable aid and ally.

SIR THOMAS EDWARD THORPE, K.C.B., D.Sc., F.R.S.

10/3/1919.

The honour in which I hold my Honorary Membership of the Leeds Philosophical and Literary Society has been increased by the request that I should contribute to the Centenary Volume some reminiscences of the Society, and its relations to the intellectual life of the town, during the eleven years that I resided there. I accept the invitation with a special pleasure, for I look back upon those years with peculiar satisfaction. At the same time I confess that the invitation is not without its perils. It is addressed to one who has now arrived at that period of life which has been characterised as "anecdotalage," and when reminiscences are apt to run into loquacity, when "Age, too, shines out, and, garrulous, recounts the feats of youth." I trust, however, I may succeed in exercising a due restraint, and that the *disjecta membra* of my recollections may in some measure serve to convey the pleasure with which I recall them.

My connection with the Society began with my appointment in 1874 as one of the first Professors of the Yorkshire College of Science, then recently founded and housed in very modest quarters in Cookridge Street. I am the sole survivor of the trio then selected, my colleagues, Green and Rücker having gone to join

The innumerable caravan which moves
To that mysterious realm where each shall take
His chamber in the silent halls of death.

It was natural and inevitable that we professors should at the very outset of our connection with Leeds find ourselves associated with its Philosophical Society. It was the chief centre of the intellectual activity of the town and those who directed its affairs were among the most influential supporters of the young and struggling Institution to which we were attached. It was, perhaps, equally inevitable that we should be called upon to make our debut before a Leeds audience in the first session of our membership, and each of us figured on the lecture programme of 1874-75 in connection with subjects which had at least the merit of dealing with observational or experimental inquiries which we had initiated or with which we were associated—a reversion, to some small extent, to the original procedure of the Society.

The Honorary Secretaries at this period were Mr. Thomas Wilson and Mr. Richard Reynolds, both of whom have left their mark on

the educational development of the town. Of Mr. Wilson, who died in the following year, at an advanced age, I have a very clear recollection. He had served the Society with judgment and a quiet zeal, as one of its Honorary Secretaries, for many years. He was a singularly attractive personality, of a benign presence and genial disposition, a cultured scholarly man possessed of a gentle old-fashioned courtesy which impressed all who were brought in contact with him.

Mr. Richard Reynolds became Senior Secretary on Mr. Wilson's death, and occupied that position so long as I remained in Leeds. He, too, has joined the majority, and I may be permitted to offer my meed of appreciation of his character and of his services, both to the Society and the College of which he was one of the most active promoters, and which he served as Honorary Secretary during its earliest and most critical years. It would be impossible to say which of the two institutions he had most at heart. He acted as if he considered they were, or ought to be, inseparably connected—that one was in some manner the complement of the other—and his policy was to perpetuate this intimate union in some such way as has been accomplished in the analogous case of Manchester. It was largely through his tactful management that we of the College were able to welcome the Curator of the Society, Mr. Miall, as a colleague, first as Lecturer, and subsequently as Professor of Biology—an event which marked a turning point in the development of the College, since it was the first clear indication on the part of the majority of the Council of their wish to enlarge the scope and functions of the Institution and to raise it from the position of a Trades School to that of an organisation which should have within it the potentiality of a University. Mr. Reynolds' action was, no doubt, greatly facilitated by the intrinsic merit of the appointment, apart from the consideration referred to. The Curator's position as a man of science was already well established, and he had more than a local reputation as a teacher and lecturer. The Council of the Philosophical Society had shown its appreciation of his merits by doing all that its limited means permitted to further his anatomical and zoological studies.

I am speaking of what is well within my knowledge when I say that Yorkshire is under a great obligation to Reynolds for the part he played in the establishment and management of the College during its earliest years.

It is, however, with Mr. Reynolds as Honorary Secretary of the Philosophical Society that we are now mainly concerned. No man had ever served the Society with more disinterested zeal or efficiency. It was constantly in his thoughts, and he was always studying how to increase its usefulness or to strengthen its position ; and no suitable opportunity of adding to its collections or of enhancing the attractiveness of its lecture-courses was ever let slip. Mr. Reynolds was a pharmacist of the old school and brought to the practice of his business a sound general knowledge of the sciences with which it is concerned. He had been a Teacher of Chemistry in the Leeds Medical School as successor to William West, a former President (1850-1, 1851-2) of the Leeds Philosophical Society.

Mr. West was a Fellow of the Royal Society, and the Royal Society's Catalogue of Scientific Papers shows that he was the author of a number of communications on the Mineral and other Natural Waters of Yorkshire, on water for steam-raising purposes, boiler incrustations, calorific value of fuels, etc., published between 1823 and 1849 in the Quarterly Journal of Science, Philosophical Magazine, Proceedings of the Yorkshire Geological and Polytechnic Society, etc. The first volume of the Transactions of the Leeds Philosophical Society contains a paper by him on The Varieties of Water.

Any reference to the connection between the Society and the Yorkshire College naturally brings up the name of Dr. J. D. Heaton who was Chairman of its Council from its foundation until his death in 1880. His work in connection with the creation of the College, and his services in fostering its growth, have been well described in the admirable biography of him from the pen of his fellow-townsmen, the late Sir Wemyss Reid, well-known to a former generation as the able editor of the *Leeds Mercury*, and as a member of Council and occasional lecturer to the Society.

Dr. Heaton had already passed the Chair at the time I joined the Society and was then a Vice-President and Hon. Librarian to which last position I had the honour of being his successor. He was a constant attendant at the meetings, and the well-known hospitality of Claremont was frequently extended to the many distinguished persons who lectured before the Society, a courtesy which greatly facilitated the work of the Council in securing their presence.

Together with my colleagues, Green and Rücker, I became

a member of the Council of the Society in 1877-8, and served as one of its officers until my departure from Leeds as Sir Edward Frankland's successor in the Royal College of Science, South Kensington. I thus acquired an intimate knowledge of the working of the Society, and learned to appreciate some of the difficulties connected with its management. Our main concern was, of course, its financial position, which was never adequate to our necessities. In addition to the outgoings connected with the upkeep of the building, there was a constant charge on our limited resources in maintaining and extending the museum and in meeting the provision for the lecture courses and annual *Conversazione*. The expenses connected with the museum were to some extent met by receipts from visitors, and the *conversazione* partially paid for itself by the sale of tickets to friends of members. But although we had to husband our means, the Society was fairly prosperous. We had little or no difficulty in arranging an attractive lecture programme, session after session, and the attendance of members was generally satisfactory. The *Conversazione* was a very popular feature, was always looked forward to with interest and we could confidently count upon a large gathering. We had usually some scientific novelties to show there in addition to special features of importance for which we were largely indebted to friends.

The business of the Council was not very onerous, and thanks to the efficiency of the Assistant Secretary, Mr. L. C. Miall, and latterly Mr. W. F. Husband, it was soon transacted. Our main routine duties may be said to have been the arrangement of the lecture programmes and the preparations for the Annual *Conversazione*.

Of my colleagues during these years the greater number have now passed away. Mr. Edward Filliter and Mr. Walter Baily, who continued their interest in educational work on leaving Leeds, I occasionally saw after their removal to London. Sir Wemyss Reid I constantly met in town. Mr. Sykes Ward was seldom present at our Council Meetings as the state of his health precluded his attendance. But I not unfrequently saw him at his house, Denison Hall, and enjoyed his conversation on chemical subjects and his reminiscences of the early days of the Society. He was one of its Honorary Secretaries from 1840 to 1869 and had many anecdotes of its founders and of Leeds in early Victorian days. He was in fact a connecting link between the old Society which, as originally constituted, was conducted on much the same principles as the

Sister Society of Manchester. He was a man of wide scientific interests and had been an active worker in pure and applied chemistry and physics, contributing papers to the Reports of the British Association on the galvanometer and on voltaic and magnetic phenomena, on crystallization under extreme pressure, and on the chemistry of photography.

Mr. John Ralph, the Editor of the *Yorkshire Post*, was a member of Council during the whole of my period of office. He was a scholarly man of marked literary ability and is remembered as the author of "The Lives of the Laureates."

Of Mr. Sydney Lupton I have already recorded my recollections in the Journal of the Chemical Society. He was continuing his work on chemical subjects during the first years of my residence in Leeds, and I occasionally visited the laboratory he had established in his home at The Harehills, Roundhay.

Mr. Thomas Scattergood was one of my earliest friends in Leeds, and I had the greatest respect for his sterling character, sound judgment, and strong common sense.

He was Lecturer on Forensic Medicine at the Leeds Medical School and had a considerable reputation as a skilful toxicologist.

As might be expected from the position of Leeds in the Medical world and the prestige of its Medical School, medicine was always well represented on the Council of the Philosophical Society. In my time in addition to the names already mentioned we had Mr. J. I. Ikin, F.R.C.S., President in 1875-6, Mr. Nicholson Price, Mr. Edward Atkinson, F.L.S., President in 1885-6, Mr. John Horsfall, M.A., F.R.C.S., Sir T. Clifford Allbutt, K.C.B., F.R.S., President in 1878-9, 1879-80, 1880-1, and Dr. J. E. Eddison, President in 1883-4, 1884-5, both of the last named being still happily with us.

It cannot be said that physical science was ever a marked feature in our proceedings. In spite of its industrial activity Leeds was not the home of research in science in the sense that Manchester was.

Science, as presented to the members of the Leeds Society during the period of which I write, mainly related to subjects of Natural History, Astronomy, Meteorology, etc., lectures which needed no experimental illustrations, and in our list will be found a notable galaxy of names, all missionaries in the cause of science, who brought to the knowledge of a Leeds audience the tidings of

contemporary developments in those branches with which their names are associated.

Amongst our own members my colleagues of the Yorkshire College, Miall, Green and Rücker, did their fair share in contributions to our purely scientific proceedings, and we had occasional papers from Mr. Walter Baily, Mr. Sydney Lupton, Mr. T. Pridgin Teale, F.R.S., President in 1861-2, 1862-3, Mr. Edward Atkinson, President 1885-6, and Mr. W. E. Clarke, F.L.S.

But the Leeds Society was undoubtedly strongest on its literary and philosophical side, and in this sense may be said to have lived up to its title, as the list of communications made to it amply proves. Indeed on looking over its records during the period with which I am more particularly concerned, I am much impressed by their high character and comprehensiveness. Not that the Society was wanting in self-help. During the same period we had papers on subjects connected with education, history, literature, and the arts from our Members.

Many incidents connected with these lectures spring to my recollection, and had space permitted, or had I been unmindful of the injunction I have laid upon myself, I might have been tempted to dwell upon them. With some of the non-resident lecturers, particularly among the men of science, I was personally acquainted ; some, indeed, I could count among my friends, and this fact no doubt tends to strengthen my memory of their appearances in Leeds. Popular lecturers, like poets, are born, not made. It is not all of them that have the ease of manner, clarity of thought and polished diction of a Huxley, or the wealth of exuberant phraseology of a Tyndall. Lecturers on scientific subjects are apt to trust to their experimental illustrations to secure the attention of their audiences, and to pay little heed to elegance of exposition or a well ordered method of presentation. In this respect some of them have much to learn from their Continental confreres, especially among the French. As we had so few experimental lectures at the Philosophical Society during my time we cannot be said to have suffered at all in this respect. Lecturers like Prof. W. C. Williamson, Sir Frederick Bramwell, Sir William Flower, Dr. Dallenger, Professor Martin Duncan, were admirable speakers who had no difficulty in holding the interest and attention of their auditors. No lecturer was more popular than the late Sir Robert Ball, who managed to introduce humour into the driest of technical subjects.

Another born raconteur—also an Irishman—whom we had the pleasure of hearing lecture on “Illustrations of the Laws that regulate muscular work and fatigue,” was the Rev. Dr. Samuel Haughton, F.R.S., a Fellow of Trinity College, Dublin, who kept his audience in a ripple of laughter by the quaint humour of his illustrations, made perhaps still more humorous by the ‘brogue’ in which they were narrated.

I think it was from the literary lectures that I derived the greatest pleasure. Some of them dwell in my memory as rare intellectual treats. The nature of their subjects, the style and polish of their language, and the manner of their delivery, combined to make an indelible impression on the mind. Although it was nearly 45 years ago, I still retain a vivid recollection of the delight with which I followed a lecture by Prof. Henry Morley on “Spenser’s ‘Faerie Queene.’” It was a veritable *tour de force*. He came up to the table carrying a small 8vo. edition of the poem, within the leaves of which were inserted slips of paper to enable him the more readily to find the passages in illustration of the points he desired to make. He had otherwise not a single note. But for more than 70 minutes he kept his audience spell-bound by the charm of his manner, and the perfect ease with which he developed his matter. There was no attempt at rhetoric, but simply a quiet steady flow of modulated speech in admirably chosen words uttered with no apparent effort. Perhaps the secret of his power over his listeners was their intuitive perception of his own delights in his subject and his obvious desire to make them share his appreciation of its beauties. To me as a teacher it was the best lesson in the art of exposition I ever experienced.

In the early eighties there was a wave of popular excitement concerning what are called psychical phenomena, such as have recurred periodically from the earliest times, and which within living memory, have taken such various forms as table-turning, spirit-rapping, etc., etc. Its phase about 1883 was thought-reading. Whilst there is no doubt that much has still to be learned concerning the working of the human mind, it is notorious that human credulity and love of the marvellous have led to a great deal of humbug and fraud in connection with so-called manifestations. It occurred to some members of the Philosophical Society that a useful purpose might be served by a public discussion of the subject and this was arranged to be held on March 20th, 1883, and was duly advertised

and attracted considerable attention. At this period my colleague the late Sir Arthur Rücker and I were engaged in preparations for a magnetic survey of the British Isles, which occupied us the greater part of some 12 years, and with a view of studying the behaviour of the chronometers to be employed it was necessary for me to visit the instrument room of the telegraph department of the General Post Office in Leeds in order to receive time signals from the Greenwich Observatory, facilities for which were kindly afforded me by the Postmaster. In the course of these visits I learned that certain of the operators were in the habit of communicating with each other by "winking" long and short intervals according to the Morse Code, and I found, on trial, that two of them were particularly skilful in the practice. It naturally occurred to me that this was a possible method by which so-called "thought transference" might be effected by mediums and I had little difficulty in inducing the operators to join in our symposium with a view of demonstrating their powers. "Thoughts" written on slips of paper were handed by various members of the audience to one operator and were quickly transferred to his colleague seated at some little distance apart. The audience, who had not been informed of the method, were considerably mystified for a time. But the fact that the *ipsissima verba* of the thoughts were repeated soon gave away the show, and the acute intelligence of and quick observational power of Mr. Thomas Marshall detected the process. But the demonstration served its purpose by showing that it is unwise to invoke the unknown before proving that the known is unable to account for the phenomena and as the Latin tag has it "*ab actu ad posse valet illatio.*"

Shortly after the foundation of the Yorkshire College the Professors and certain of their friends in the Society agreed to form a sort of subsection of the Philosophical Society which should revert to the system in the first year of its existence, by reading and discussing papers of a purely scientific or technical character and therefore unsuited to a general audience such as assembled to hear the lectures announced on the sessional programmes. The members of the new association, which called itself "The Priestley Club," were not limited to the Society, for we welcomed any from the neighbouring towns who were engaged in scientific enquiry or who undertook to contribute to our proceedings. The Council of the Philosophical Society were in full sympathy with our objects and kindly allowed us the use of the library and the lecture theatre

when necessary, for our meetings, which were usually held on Saturday evenings. Many pleasant gatherings resulted and a useful stimulus was exerted. Occasionally we were favoured with the company of scientific friends from neighbouring colleges who gave us accounts of investigations on which they were engaged, or had recently published. On one such occasion Dr. Carnelley, whose early and untimely death deprived science of a most original and able worker, demonstrated the formation of what was known at the time as "hot ice," that is ice which appeared to exist at temperatures above its ordinary melting point. The phenomenon, which was rather mysterious, attracted considerable attention at the time, but Carnelley's interpretation of it was not generally accepted, and after witnessing the experiment, my colleague, Rücker, in the course of the subsequent discussion, pointed out what he considered the fallacy on which it rested—an explanation in which Carnelley eventually concurred. During the discussion it appeared that some of the members were unaware of certain facts which bore upon the matter, and I undertook at the following meeting to show some experiments in illustration of what is known as "The Spheroidal State," among them that of plunging the hand in molten lead and scooping out the fluid metal. It seems at first sight a foolhardy procedure, but in reality is free from danger, provided certain conditions are observed, one of which is that the molten metal shall be at a sufficiently high temperature above its congealing point. We had acting at that period as temporary porter at the Philosophical Hall a man, of a somewhat gruff exterior, with the incongruous name of Venus. During the afternoon, prior to the meeting, I had my apparatus conveyed to the lecture theatre, and arranged my experiments, instructing the porter to light a fire in the adjoining library on which to melt the lead in the large ladle provided, enjoining him to do so in good time before the Club assembled. On coming down to the Hall some ten minutes or so before the time, I was a little perturbed to find that the fire had only just been lighted, and was still very 'black.' However, I proceeded with my lecture, trusting that all might be well. At the appointed signal Venus brought in the ladle of molten lead, and I whispered to him my hope that it might be hot enough. "'ot" he growled in a loud *sotto voce* "It's 'ot as 'ell!" This, no doubt, added to the 'thrill' of the situation, but I had some difficulty in convincing my colleagues that it was an entirely unrehearsed effect.

Professor L. C. MIALl, D.Sc., F.R.S.

In 1818, three years after what the town of Leeds had hailed as "the permanent restoration of peace,"* a number of citizens met to consider the possibility of setting up "an efficient scientific re-union," and at this meeting was constituted the Society which now celebrates its hundredth anniversary.

The name given to the Society calls for a word of explanation. In the 17th and 18th centuries *Philosophical* was the usual equivalent for our word *Scientific*; the familiar name of *Philosophical Transactions* exemplifies this use.† Most other nations reserve the word *Philosophy* for a particular kind of abstract speculation, and complain that we in England degrade Philosophy to the kitchen. All of us, English and foreigners alike, seem to have forgotten the etymology and history of the word.

Everybody who occupies himself with the Philosophical Societies of England and their origin will be inclined to ask: "What caused them to spring up when and where they did? Nearly all of them sprang up in the north of England, most of them in the last years of the eighteenth and the first years of the nineteenth century. They are not scattered at random over the north of England, but restricted to populous places and with hardly an exception to such as are situated on coal-fields. The date of Watt's patent for his steam engine is 1769. It is needless to insist upon the connections of coal with steam, and of steam with the growth of large towns. Birmingham, Leicester and Bristol, which all have coal close at hand, have their Philosophical Societies, though they do not happen to belong to the north of England.

Notwithstanding the troubles and anxieties of the time, the men of Leeds stood to their purpose, and founded their Society. By 1837 they had gained so much confidence that they ventured to publish Vol. I., Part I. of their Transactions. Nobody else I think, is likely to give an account of this publication, so I will attempt the task myself.

The Leeds Society was probably not aware that the very name of *Transactions* was ambitious. The *Philosophical Transactions*, and also the Transactions of the Linnean Society, the Geological

* Introduction to *Trans. Phil. and Lit. Soc. of Leeds*, 1837.

† The first and greatest of our scientific societies bears the name, not of *Philosophical*, but of the *Royal Society*, simply because Charles II. bestowed upon it his sublime patronage.

Society, etc., include only the pick of the dissertations accepted for publication, and are printed in quarto to facilitate illustration by large plates.

This was not the only mark of confidence which the Society exhibited. The founders seem, like Lord Bacon, to have taken all knowledge for their province, for they discuss matters of physical geography, chemistry, Romano-British antiquities, zoology and geology. Want of special acquaintance with several of these studies will oblige me to deal very briefly with four of the seven papers.

Of Luccock on the Bed of the Mississippi I can only say that the author had resided long in some of the less known parts of North America.*

West, who writes on the Varieties of Water, enjoyed the reputation of being a competent chemist in those days. John Hey's Notice of certain Roman Coin-moulds is a careful and learned account of a curious usage of Romano-British times. A number of these coin-moulds are now preserved in the Society's Museum, and there is a detailed notice of these and similar finds by Mr. Aquila Dodgson in the Annual Report of the Society for 1917-18. Similar coin-moulds have been found in other countries which became subject to the Roman Empire. The author of this paper, Mr. John Hey (a son of the eminent Leeds surgeon, William Hey), was honorary curator and librarian to the Society from 1829-30 till 1836-37, when he died.

E. S. George, who succeeded John Hey as honorary curator and librarian, was a self-taught student of chemistry and geology; he was a partner in the Leeds firm of Thomas George and Sons (chemists). His paper on the Yorkshire Coalfield was left incomplete by his death at the age of 29 in 1838. The Yorkshire Geological and Polytechnic Society then undertook the task of collecting and coordinating the information possessed by local coal-owners, but soon found itself unequal to so extensive and difficult a piece of work. The Geological Survey, which employs the whole time of trained surveyors, at last mapped the coalfield and published a large and elaborate memoir on it, edited by the late Professor A. H. Green. No single man and no collection of untrained men could have done the work properly according to the standard of our own day.

* *Report Leeds Phil. Soc.* for 1825-6, p. 10.

The remaining papers of the Leeds Transactions, and undoubtedly the most important papers in the volume, are Nunneley on Slugs and Teale on *Actinia* and *Alcyonella*. The authors of these three papers were well-known surgeons, whose names are still perpetuated in the profession. Their memoirs are illustrated by twelve excellent plates, drawn and engraved by Henry Denny, the Society's Curator. The growth of knowledge has of course detected errors and imperfect knowledge in the papers of Nunneley and Teale, but they were solid researches, made with care and labour by competent observers.

Nunneley and Teale, alone among the contributors to the Leeds Transactions, had enjoyed a regular professional training. In the early years of the nineteenth century such training was not held to be nearly so indispensable to scientific work as we now suppose. England had seen how men only very slightly educated in science, and in some cases ignorant of the very rudiments of school-knowledge, might make valuable scientific discoveries. Priestley (1733-1804) attributed his success to the ignorance which forced him to devise apparatus and methods of his own. John Dalton (1766-1844), the author of the atomic theory, thought that he could carry all the books he had ever read on his back. Davy (1778-1829) used to say "What I am, I made myself." Brindley (1716-1772) had not even received an elementary schooling, yet he had done great things in civil engineering. Gilbert White (1720-1793) a country clergyman, educated only in the ancient classics, had written familiar letters on the natural history of his own parish, letters which breathed a new spirit and incited men to observe, inquire and reason as they had rarely done before.

Faraday (1791-1867) began life as a newsvendor's errand-boy, and thought it high promotion to be engaged as laboratory-assistant to Davy at a salary of 25s. a week.

At the very time that Nunneley and Teale were investigating slugs and polyps in Leeds, Charles Darwin was laying the foundations of his illustrious career. His University course had been slight and insufficient; it was the Voyage of the *Beagle* (1831-6) that made him a man of science.

Such instances, which might easily be multiplied, at least partially justify the belief, once generally accepted in England, that a naturally gifted and zealous worker will, with or without

direction, force his way through all obstacles, even in so difficult an art as that of scientific investigation.

Of course training becomes more and more indispensable as the sciences develop. The accumulated results of past labour increase in volume; the methods of research become refined and complicated; the student of one science finds it necessary to be practically acquainted with other sciences as well. Hence we are now convinced that the guidance of an experienced investigator is almost always indispensable to the novice. Even in 1837 we may be quite sure that Nunneley and Teale could not have done what they did if they had not gone through the course of the medical school, and been acquainted with Swamerdam's *Biblia Naturae*.

It is rather surprising that the directors of the Leeds Philosophical Society about the year 1837 failed to remark that a regular succession of memoirs as good as the best of those which made up the first volume of their Transactions could not possibly be kept up in Leeds. Busy professional men could not year after year spend their time and possibly impair their prospects by Opera Subseciva of an unpractical kind. A few years later Dr. W. B. Carpenter found it a hard task to earn his bread in London while he was labouring to base a career of pure scientific study on his early medical studies.

Nor could Leeds, or even Yorkshire (in 1837) offer to the scientific student any post which would provide him with a decent livelihood unless he had made his mark either in medicine or engineering. Professorships are the natural rewards of most kinds of scientific research, but Yorkshire had no professorships at all, while no man of science trained only in Yorkshire could reasonably count upon a post in any one of the few Universities which then existed in England.

These reasons are of themselves enough to explain why the early effort of the Leeds Society was not renewed, and why for many years scientific research almost completely died out in Yorkshire.

The Museum alone grew steadily and during all this time constituted the most solid part of the work of the Society. The papers read at the meetings attracted little attention and the attendance fell off. At last Mr. O'Callaghan, who was a Leeds man only by adoption, devised a new expedient, that of inviting men of national distinction to entertain the Society with discourses which should

be at once popular and instructive. The new plan answered expectations, and the original scheme of work underwent something which might be called a revolution.

The foundation of the Yorkshire College of Science, which soon became the Yorkshire College *sans phrase*, and in time the Leeds University, gave new life to the Philosophical and Literary Society. The College did not directly spring from the Society, though its first Chairman of Council (the late Dr. Heaton) and its first Hon. Secretary (the late Richard Reynolds) served, or had recently served, similar offices in the Society. While the College was young and struggling, it received important help from the Society, whose meeting-rooms and other resources were freely used for College purposes; the College in turn became useful to the Society; the professors served on its Council and lectured before its members. Scientific research, which had long been discontinued in Leeds, was now vigorously carried on by Rücker, Thorpe and Green, members of the first professorial body, and Leeds, if it knew or cared, might have been proud to know that the best of its scientific output was accepted for publication by national Transactions of the highest character.

It will amuse me and possibly a reader here and there if I set down a few chance recollections of the Society as it was a generation ago.

The Curator of the museum for forty-five years before his death in 1871 was Henry Denny, a respected naturalist of the old school; Two of his entomological works are still serviceable. In the days when I used to meet him now and then his zeal for the enrichment of the museum was still unquenched, and he delighted to crowd the lecture-table, just before one of the meetings, with his new acquisitions—objects of natural history, ornaments of savage tribes, or local antiquities, mostly purchased at the cost of wealthy friends of the Society.

One old member of the Society, who had once been active, still retained his love of experimental science, manifested by lengthy explanations, rendered indistinct by asthma. He had years before lectured now and then on chemistry or physics, and one member of the Society described him as the only man alive who could pour sulphuric acid into blue litmus without changing its colour.

The five Museum Assistants who served in my time have yielded one professor (Denny of Sheffield) and three curators (Crowther of

Leeds, Clarke of the Edinburgh Museum of Science and Art, and Waite of Canterbury, N.Z.).

I remember with gratitude the generous and faithful service of Thomas Pollard, hall-porter during most of the time that I was curator. He had served on a man-of-war during the Crimean war, and to this training he attributed his remarkable versatility. "In the Navy," he would say, "we are taught to turn our hands to anything that is wanted." Scrubbing and cleaning were duties that he never shirked ; indeed he went so far as to devote to them a large part of his own time, because then the galleries were empty. He had either adopted from naval practice or invented a mop of peculiar form, with a short handle, to which were fixed many loops of rope, several yards long. This mop he believed to be far better than any other. He spent much of his spare time as he sat at the door in fabricating anything that might be wanted in the museum, or in his own quarters, or by his friends. I remember that he used to supply my children with fabrications that gave them much delight. Joiner's work was his chief excellence, but he could cut and fix glass, white-wash and paint creditably (if taste in colour was not demanded), knit and darn. At last he grew too old for work and retired to Masham to live on his pension and his savings. When we said good-bye, I had the pleasure of handing him a small sum of money voted by the Council in acknowledgment of his services.

CHAPTER VI.

*LIST OF LECTURES DELIVERED
TO THE
LEEDS PHILOSOPHICAL AND LITERARY SOCIETY
DURING THE YEARS 1819-20 to 1920-21.*

<i>Lecturer.</i>		<i>Subject.</i>
1819-20.		
John Atkinson .. ..	..	The Effects of Spirituous Liquors on the Human Frame.
John Atkinson .. ..	..	The Destruction of Herculaneum and Pompeii.
William West .. ..	..	Some Colours for painting found at Pompeii.
Joseph Atkinson .. ..	..	The Comparative Merits of Literature and Natural Philosophy.
Edward Baines, Junior .. ..	..	The Crusades.
R. C. Battye .. ..	..	Vision.
William West .. ..	..	Iodine.
E. Sanderson George .. ..	..	Prussian Blue from various substances.
Thomas Blayds .. ..	..	Icebergs.
C. Turner Thackray .. ..	..	Existence of the membrana nictitans in sheep, horses, &c.
John Cadman .. ..	..	The whiteness of Snow.
Rev. R. Winter Hamilton .. ..	..	Personal identity.
E. Sanderson George .. ..	..	Chemical Terms.
Dr. Adam Hunter .. ..	..	The Different Theories of the Earth.
John Jowitt .. ..	..	The best means of preserving health.
John Luccock .. ..	..	The best means of acquiring knowledge.

1820-21.

John Sangster .. ..	..	Mental Powers.
W. Shaw .. ..	..	Laws of Solon and Lycurgus.
Dr. Adam Hunter .. ..	..	The Nature and Properties of the Atmosphere.
William West .. ..	..	The Atomic Theory.

The above are the earliest papers and demonstrations given before the Members formed as a Temporary Association of the Leeds Philosophical and Literary Society, November 12th, 1819.

*Lecturer.**Subject.*

1821-22.

First Meeting of the Society in its own Hall was on Friday, April 6th, 1821.

Jonathan Wilks, Vice-President ..	Inaugural Address to the members. (President Mr. John Garth Marshall, unavoidably absent.)
Charles Turner Thackray	Introductory Discourse.
Dr. James Williamson	The Phenomena of Sleep.
John Luccock	Certain Specimens connected with Natural History.
William Smith	Geology of Yorkshire.
John Marshall	Geology, involving a new and interesting Theory of the Formation of the Earth, and the various Changes in its Struc- ture still taking place.
Dr. Adam Hunter	The Different Theories of the Earth.
Dr. Milligan, Edinburgh (with observations by Dr. Hunter)	Craniology.
Rev. Richard Winter Hamilton ..	The Uses of Intellectual Philosophy.
John Sangster	The Instinct of the Lower Animals.
William Osburn	The Termination of the River Niger.
R. B. Watson	Money.
Dr. Gilby, Wakefield	The Nature and Use of the Science of Geology.
Edward Baines, Junr.	The Rise of Art, Science and Literature amongst the Athenians.
Dr. J. K. Walker, Huddersfield ..	The Oldham Spa.
Rev. Joseph France, Silcoates, nr. Wakefield	The Discoveries made by means of Glass.
Edward Sanderson George	The Geology of the Neighbourhood of Leeds.

1822-23.

John Spear, Edinburgh	The Faculty of Taste.
William West	Iodine.
E. S. George	Remarks on the Geology of the beds above the Chalk in Yorkshire. Analysis of the Huddlestone and Fair- burn Limestone.
William West	Notice on the Ignition of Charcoal by the Galvanic Battery.
Wm. Hey	Coloured Shadows.
James Marshall	Meteorology.
Rev. R. W. Hamilton	The History and Progress of the Human Species, considered in relation to intellectual and social improvement.
W. Osburn, Junr.	The Origin of the South Sea Islanders.
J. Gough, Kendal	An Essay on the Mechanical Fluctuations of the Barometer, and of the Origin of the uncertain Winds which prevail in the Temperate and Frigid Zones.
Jas. Montgomery, Sheffield	Modern English Literature.
M. Allen, York	The Effects of Atmospheric Changes on the Health and Spirits, particularly on the old Insane.

<i>Lecturer.</i>		<i>Subject.</i>
Dr. James Williamson	.. ..	The Influence of Lord Bacon's Philosophical Speculations in promoting the Progress of Experimental Science.
Ed. Baines, Junr.	.. ..	The Elgin Marbles, and the Causes of the Excellence of Grecian Sculpture.
R. B. Watson	.. ..	Genius; its various periods of manifestation, and some of its most striking characteristics.
John Lucecock	.. ..	The Great Cave of Kentucky, commonly called the Mammoth Cave.

PUBLIC LECTURES.

Mr. Nicol	.. ..	A Course of Lectures on some subjects of Natural History.
C. Turner Thackrah	.. ..	A Course of Lectures on Physiology.

1823-24.

T. Pridgin Teale, Jun.	.. ..	The Source and Circulation of Heat in Animals.
M. Allen, York	.. ..	The Natural Division of Insanity, and on the question How Far the Mind retains or exhibits its former Individuality of Character, and how much it is altered, and the Kind and Degree, and Mode of that Alteration. With additional remarks on that subject and on the Pathology of Disordered Intellect by Dr. Williamson.
John Atkinson, Junr.	.. ..	Atmospheric Refraction.
John Atkinson	.. ..	The Utility of Corporeal and Mental Exertion.
J. Marshall, President	.. ..	The Production of Wealth and the Propriety of discussing subjects of Political Economy as distinguished from Politics.
G. S. Weidmann, Ripon	.. ..	The Origin of Language.
Rev. T. Greenwood	.. ..	Poetry.
John Atkinson	.. ..	The Classification, distinguishing Characters and Analogy of Natural Beings.
William Osburn, Junr.	.. ..	The Inhabitants of the Arctic Regions.
Benjamin Rotch	.. ..	The Condition of the Settlements in the Western Parts of America, and Emigration generally to that Country.
Dr. J. K. Walker, Huddersfield		Cambodunum, and the late Discoveries at Slack, near Huddersfield.
David Bogue, London	.. ..	The Nature and Operations of the Moral Faculty in Man.
G. S. Weidmann, Bishopton, nr. Ripon		Some points connected with Poetical Composition.

<i>Lecturer.</i>	<i>Subject.</i>
James Montgomery, Sheffield ..	Literature, retrospectively, from the Earliest Period to the Middle Ages.
W. Morley Stears	Describing a Safety-Valve on a new Principle.
Charles Waterton	Plans found most successful in preparing Subjects in Natural History.

PUBLIC LECTURES.

John Dalton, F.R.S., Manchester	A Course of Lectures on the Principles of Mechanics and Meteorology (six lectures) and one on the Atomic Principles of Chemistry.
William Hey	Two Lectures on the Anatomy and Physiology of the Eye.
S. Smith	The Growth and Structure of the Teeth.
Dr. James Williamson ..	The Organ and Faculty of Hearing.

1824-25.

Dr. James Williamson ..	A Retrospect of Philosophical Societies and some considerations on their utility.
John Luccock	The Bed of the Mississippi.
Rev. R. Humphreys ..	The Philosophy of Names.
John Philips	Coal Plants and the Origin of Coal.
T. Pridgin Teale	The Physiology of Plants.
J. Yorke	How Far Poetical Views are compatible with strict Justice.
Jas. Entwistle	The Revival of Literature in Italy in the 14th Century.
Wm. West	Mental Originality.
Rev. R. W. Hamilton ..	Personal Identity.
Francis T. Billam	Painting and Painters, from the time of the accession of Henry VIII. to the death of Charles I.
Michael T. Sadler	The Principle of Population, considered in connection with the Poor Laws.
Michael T. Sadler	The Best Means of Improving the Conditions of the Poor in Large Towns.
Dr. M. Traill, F.R.S., Liverpool	The Object of Capt. Franklin's present expedition to the North Pole.

PUBLIC LECTURES.

W. West and E. S. George ..	Twelve Lectures on the Principles of Chemistry, Electricity and Electro-Magnetism.
J. Atkinson and William Osburn, Junrs.	Six Lectures on the Hieroglyphical Antiquities of Egypt.
Dr. M. Allen	A course of Lectures on Phrenology.
Michael T. Sadler	A course of Lectures on the Poor Laws of England.
E. V. Rippingille, Bristol ..	Seven Lectures on the Arts of Design.

*Lecturer.**Subject.*

1825-26.

S. Bailey, Pres. of the Sheffield Lit. & Phil. Soc.		The Mutual Relations subsisting amongst the several Sciences.
R. Taylor .. ..	.. ..	The Connection between Instinct and Reason.
Rev. R. W. Hamilton ..	.. ..	Craniology.
Rev. R. H. Bathurst ..	.. ..	The Knowledge possessed by the Ancients on the subject of Mineralogy.
John Marshall .. ..	.. ..	The present State of Education in England, considered as a preparation for Active Life.
John Sangster .. ..	.. ..	The State of Science amongst the Arabians during the Middle Ages.
Dr. J. K. Walker .. ..	.. ..	The Fossils discovered in the Neighbourhood of Huddersfield.
Dr. James Williamson ..	.. ..	The Roman Antiquities of Nimes in Languedoc.
William Hey .. ..	.. ..	The Philosophy of Music.
Rev. Joseph Humphreys ..	.. ..	The Philosophy of Ancient Names.
Benjamin Rotch .. ..	.. ..	Marriage Customs.
Rev. Dr. Joseph Hutton ..	.. ..	The Advantages of Classical Education.
Francis T. Billam .. ..	.. ..	Stained Glass, and Glass Stainers, from the Invention of the Art to the Present Time.
Dr. T. Williamson .. ..	.. ..	The Principles of Early Education, particularly in reference to the formation of Infant Schools.

PUBLIC LECTURES.

John Phillips, Hon. Member of the Leeds and of the Yorkshire Phil. Societies.	Course of Lectures on Geology and Organic Remains.
Mr. Ogg	Course of seven Lectures on subjects of Natural Philosophy.

1826-27.

W. West .. ..	.. ..	The Twentieth Century (in verse).
Dr. R. M. Fawcett .. ..	.. ..	On the Varieties of the Human Race.
J. Entwisle .. ..	.. ..	The Revival of Learning in Italy.
Rev. W. H. Bathurst, President		The Limits of Human Knowledge.
Wm. Wildsmith .. ..	.. ..	The Functions of the Brain.
Wm. Carey, London .. ..	.. ..	The Necessity, the Wisdom and Glory of cherishing a National Spirit in the Patronage of the Fine Arts, and a National Pride in the excellence of British Artists.
Edward Baines, Junr. .. ..	.. ..	The Origin and History of Printing, with some account of the most celebrated Printers, and of the principal public Libraries of Europe.
John Hey .. ..	.. ..	The Anatomy of Expression in Painting and Sculpture.
F. T. Billam .. ..	.. ..	The Signs of Inns and Shops.

<i>Lecturer.</i>	<i>Subject.</i>
J. G. Wood .. ..	.. Egypt, its former Magnificence and Antiquities, Manners, Customs, &c., &c.
Rev. R. Humphrey .. ..	.. The Philosophy of Names.
John Phillips .. ..	.. The Mechanical Effect of Rain, Rivers, and the Sea, on the Materials which compose the Surface of our Planet.
Wm. Osburn, Junr. .. ..	.. Egyptian Mummies.
Rev. George Young, Whitby .. ..	.. The Discovery of Crystals of Pyrites in some old Blocks of Wood, dug up at Whitby.
Rev. Dr. J. Hutton .. ..	.. The Principles which should guide us in the Choice of our Intellectual Pursuits.

PUBLIC LECTURES.

John Phillips, Hon. Member .. ..	.. Course of Lectures on The Invertebral Animals.
Mr. Wood, London .. ..	.. Course of Lectures on Ancient History, as connected with Architecture.

1827-28.

Rev. W. H. Bathurst, President	The Imperfections of Language.
Michael T. Sadler, Vice-Pres. .. ..	.. The Balance of the Numbers and Food of Animated Beings.
John Phillips .. ..	.. On Sensation in Animals.
John Atkinson, Junr. .. ..	.. On Gypsies.
Edward Baines, Junr. .. ..	.. The History and Uses of Telegraphs.
Rev. G. S. Wiedmann .. ..	.. The Moral Influence of History.
Donald M'Farlane .. ..	.. The Origin of Poetry.
Rowland M. Fawcett, Cambridge	The Eastern Origin of Mankind and their Primary Dispersion over the Earth.
F. T. Billam .. ..	.. The Progress of Painting from the Death of Charles the First to the close of the Reign of George the Second.
John Darby .. ..	.. The Advantages to be derived from Mathematical and Philosophical Knowledge.
William Hey, Junr. .. ..	.. Apparitions.
John Dalton, F.R.S., of Manchester	The Colour of the Sky, and the Relation subsisting between Solar Light and the Light of Combustion.
F. T. Billam .. ..	.. Coincidences.
Michael T. Sadler .. ..	.. The Poetry of Goldsmith.

PUBLIC LECTURES.

William Carey .. ..	.. Course of Lectures on The Fine Arts.
E. S. George .. ..	.. Laws of Chemical Combination and Analysis.
Rev. R. W. Hamilton .. ..	.. The Philosophy of the Intellectual Emotions, and of their corresponding expressions, applied to the examination of Modern Materialism.
Dr. Williamson and W. Hey .. ..	.. Course of Lectures on The Organs of Sensation.

*Lecturer.**Subject.*

1828-29.

Mr. T. Sadler, President	..	..	The Progress of Ancient Civilisation.
E. S. George	..	..	The Geology of Yorkshire.
F. T. Billam	..	..	The Character and Condition of Women in various Ages and Countries.
Dr. Alexander Taylor	..	..	The Physical Modes of Matter.
Richard Atkinson	..	..	Omens.
S. Woodward, Norwich	..	..	The Origin of Merchants' Marks.
Wm. Osburn, Junr.	..	..	The System of Numerical Notation, and on the Calendar of the ancient Egyptians.
Dr. J. Williamson, Vice-President			The uses and abuses of Hypotheses in Science.
John Sangster	..	..	The Origin of Gothic Architecture.
Joshua Dixon	..	..	Meteors and Meteoric Stones.
Henry Denny	..	..	The Metamorphoses of Insects.
John Wilkinson	..	..	Armorial Bearings. A Discussion upon Civilisation.
William Osburn, Junr., Secretary			The Origin of Written Characters.

PUBLIC LECTURES.

T. Pridgin Teale	..	..	A Course of Lectures on The Comparative Anatomy of the Cerebral and Nervous Systems.
Wm. Osburn, Junr.	..	..	Hieroglyphics.

1829-30.

Rev. R. W. Hamilton	..	..	Synonyms.
Wm. West	..	..	The Varieties of Water.
Luke Howard, F.R.S.	..	..	The Advantages of Civilisation to Man- kind, and on the Possibility of pro- moting it by simple and direct Methods.
Samuel Bailey, Sheffield	..	..	The Logic of Aristotle.
John Phillips, York	..	..	Digestion in Animals.
Rev. John Dodsworth	..	..	A Review of the Progress of Classical Literature, as connected with some of the Universities and Literary Estab- lishments in Europe.
Michael T. Sadler, M.P.	..	..	The Necessity for Exertion, as promoting the Progress of Civilisation.
James Entwisle	..	..	The German Literature of the Eighteenth Century.
Edward Baines, Junr.	..	..	The Moral Influence of Free Trade.
F. T. Billam, Vice-President	..	..	The History and Antiquities of Churches in England.
John Wilkinson	..	..	The Tune of Rhythm of the Human Speech.
Rev. William Turner, Halifax	..	..	The Nature and Extent of Mathematical Evidence.
Rev. Dr. Joseph Hutton	..	..	The Choice of our Subjects of Study.

*Lecturer.**Subject.*

PUBLIC LECTURES.

Mr. Murray	..	..	..	A course of Lectures on "Chemistry and Electricity."
John Phillips, York	..	..	..	A Course of Lectures. Subject not stated,

1830-31.

William West	..	..	..	The Decline of the Roman Empire, as related by Gibbon.
Henry Denny	..	..	..	An Enquiry how far the lower orders of Animals are capable of exercising Reason.
Rev. James Acworth	..	..	..	The Application of Mathematical Reasoning to Metaphysical and Moral Science.
Dr. Adam Hunter	..	..	..	National and Individual Character, as modified by External Causes.
Matthew Talbot Baines	..	..	..	Some of the Causes which have principally influenced the Progress of Literature and Science in this Country.
Dr. J. K. Walker, Huddersfield				The Antiquity of Warm Bathing in England.
Wm. West	..	..	..	The Boiling Point of Water, under certain Circumstances, with Memoranda of Experiments.
Luke Howard, F.R.S.	..	..	..	An Abstract of a Meteorological Register, kept at Ackworth School, for 1830.
Robert Hall	..	..	..	The History of Penal Institutions illustrated by the Criminal Law of Athens.
J. G. Marshall	..	..	..	The advantages of a regulated and permanent system of Emigration.
John Hey	..	..	..	A Notice of some Roman Coin Moulds in the Museum of the Society, found at various times, at Lingwell Gate, near Wakefield.
J. Hirst Whitehead	..	..	..	The Probable Results of the present State of Science.
Dr. J. P. Kaye, Manchester	..	..	..	The Phenomena of Suspended Animation.
Rev. R. W. Hamilton	..	..	..	The Yorkshire Dialect.
Dr. James Williamson, Vice-President				The alleged Influence of certain Occult and Preternatural Causes on the Corporeal Functions, especially in reference to the subject of Modern Miracles.

1831-32.

Wm. Hey, President	..	..	..	Vapours.
William Osburn, Vice-President	..	..	..	Ceremonial Magic.
Henry Denny	..	..	..	The Natural History, Devastations, and Uses of Locusts.
Dr. Alexander, Wakefield	..	..	..	A Phrenological Analysis of the Theory of Dreams, Spectral Illusions, and some of the more usual Phenomena of Mental Derangement.

<i>Lecturer.</i>	<i>Subject.</i>
Rev. — Taylor, Manchester	.. Part 1. The Improved Means afforded by the Progress of Knowledge, of Elucidating the History of the Past, and the Importance of such Elucidation in reference to the future Prospects of Society.
Richard Matthews .. ..	.. The Distribution of Animals over the Surface of the Globe.
Rev. — Taylor, Manchester	.. Part 2. The Conclusion of the above paper.
Robert Baker .. ..	.. Presentiments and First Impressions.
William Wildsmith .. ..	.. Several of the Incidents of Vitality, including Suspended Animation and Spontaneous Combustion.
Christopher Kemplay .. ..	.. The Comparative Beauties of Grecian and Gothic Architecture.
Robert Perring .. ..	.. Poetry—the Early English Poets.
John Wilkinson .. ..	.. The Philosophical Opinions of Bishop Berkeley, and especially on the Non-existence of a Material World.
George Waring .. ..	.. The Origin and Progress of the Ascetic Life, and of its Effects upon the Social System of Europe.

1832-33.

Wm. Hey, President .. ..	.. Vapours.
Dr. Disney Launder Thorp	.. The Happiness of Man, as depending on the proper adjustment of his Mental and Bodily Powers.
William Atkinson .. ..	.. Home Colonisation.
Sir John Byerley, London	.. The Uses of Gelatine, as applied to Human Sustance.
William West, F.R.S. .. ..	.. Miscellaneous Chemical Observations with Experiments.
John Arthur Ikin .. ..	.. The Influence of the Extension and Improvement of Machinery, particularly with reference to its Effects on the Wages of Labour, and the Condition of the Lower Classes.
Christopher Kemplay .. ..	.. Perpetual Motion, the Transmutation of Metals, and the Royal Road to Learning.
William West, Secretary .. ..	.. The Intellectual Capacity of the Negro.
Rev. R. W. Hamilton, Vice-Pres.	The Yorkshire Dialect.
Dr. Adam Hunter .. ..	.. Credulity.
Edwin Eddison .. ..	.. Observations on the Cause and Increase of Crime, with suggestions for an Alteration in the Laws respecting Prison Discipline and Colonial Transportation.
Hartley Coleridge .. ..	.. The Union of Literature with the Pursuits of Commerce, as exemplified in the Life and Character of the late Mr. Roscoe.

<i>Lecturer.</i>		<i>Subject.</i>
Robert Hall .. ..	..	The History of Penal Institutions, as illustrated by the Criminal Law of Rome.

PUBLIC LECTURES.

Mr. Atherstone .. ..	..	A course of Lectures on Poetry.
Mr. Addams .. ..	..	Acoustics.

1833-4.

Dr. James Williamson .. ..	..	The Recent Improvement in Science.
William Wildsmith .. ..	..	The Theory of Intellectual Education.
Henry Denny .. ..	..	The Importance of a Knowledge of Natural History in the common affairs of life.
George Waring .. ..	..	The Influence which Literature and the state of Society and Manners exercise upon each other.
John A. Ikin .. ..	..	The Objects and Advantages of Political Economy, with a Sketch of the present state of the Science.
Charles Cummins .. ..	..	The History of the Art of Music from the earliest periods.
Rev. Thomas Kilby, Wakefield ..	..	The Music, Painting and Sculpture in Churches.
W. A. Jackson .. ..	..	The Early History and Ruins of Babylon.
John Garth Marshall .. ..	..	The Philosophy of Amusement, or Importance of a Cultivation of Imagination and Taste, duly proportioned to that of the Understanding and Moral Sense.
J. Harper, York .. ..	..	Domestic Architecture from the invasion of Julius Caesar to the reign of Elizabeth.
Thomas Nunneley .. ..	..	A consideration of some questions connected with the Natural History of Man.
H. J. Marcus .. ..	..	German Literature.
A Member of the Sheffield Philosophical Society		The Literature of the Middle Ages.

PUBLIC LECTURES.

Courses of Lectures on:—

Luke Howard, F.R.S., Ackworth		Meteorology.
Mr. Murray .. ..	..	Combustion.
Mr. Addams .. ..	..	Magnetic and Voltaic Electricity.
Dr. Lardner .. ..	..	Modern Discoveries in Astronomy.

1834-35.

W. West .. ..	..	An Account of the late Scientific Meeting at Edinburgh.
Wm. Armitage-Jackson .. ..	..	Certain Modern English Poets.

*Lecturer.**Subject.*

Christopher Kemplay	..	..	..	The General Improvement and Prosperity of Leeds as affected by the Smoke of the Factories, with some Remarks on the Means of abating the Nuisance.
T. Pridgin Teale	..	..	..	The Natural History of the Genus Actinia.
Robt. Hall, Barrister-at-Law	..	..	..	The Study of Geology.
Dr. Wright, President of the Wakefield Philosophical Society.	..	..	..	The Origin of the English Language.
Dr. Adam Hunter, Vice-President	..	..	..	Leeds and its Improvements.
John Wilkinson	..	..	..	An Appeal from Musicians to First Principles in behalf of Vocal Music.
Wm. Hey	..	..	..	The Imperfection of the Musical Scale, in reply to a paper lately read before the Society.
Rev. R. W. Hamilton	..	..	..	The Isiac Mysteries.
Rev. Joseph Holmes	..	..	..	The Motions of Bodies generally acted upon by Forces tending to a point, and particularly with reference to the Solar and Lunar Theories.
H. J. Gainsford, Sec. of the Sheffield Philosophical and Literary Society.	..	..	..	The Literature of the Middle Ages.

PRIVATE MEETINGS.

Thos. Nunneley	..	..	..	The Anatomy of Limaces (Slugs) with a separation of them into distinct Species, founded on their internal organisation.
William West	..	..	..	The Temperature of the Tunnel of the Leeds and Selby Railway.
John Wilkinson	..	..	..	The Practicability of delineating the Modulations of the Voice in Speech, by a System of Musical Notation.
Wm. Wildsmith	..	..	..	The Supposed Connexion between Odours and Miasmata.
Chas. Waterton, Walton Hall	..	..	..	On Certain Statements relating to the Rattle-Snake, made by Mr. Audubon in Jameson's Edinburgh Philosophical Journal.
J. H. Whitehead	..	..	..	Observations on the relations of certain Vapours with respect to Heat.
John Hey	The Anatomical Affinities of the Marsupialia.

PUBLIC LECTURES.

Mr. Addams	A Course of Lectures on Optics.
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1835-36.

Rev. Joseph Holmes, A.M., President.	The Inequalities of the Moon's Orbit occasioned by the disturbing influence of the Sun.
W. Wildsmith	..	..	..	The Economy of Nature, as exemplified in the first Principles of the Material World.

<i>Lecturer.</i>	<i>Subject.</i>
Robt. Hall	The Rise and Progress of the Leeds Philosophical and Literary Society.
Professor Smyth, Cambridge ..	The Study of History.
Dr. Adam Hunter, Vice-President	The Philosophy of History.
H. J. Marcus	The Classical Period of Greece compared with the Revival of Letters in Modern Europe.
John Hey	Botanical Geography.
William Osburn, Junr., Vice-President	Judicial Astrology.
Matthew Hall	The Adaptation of the Atmospheric Constitution to the Physical Condition of Man.
John Hey	Geological Climate.
W. A. Jackson	Certain Recent Metaphysical Speculations.
J. G. Marshall	The Scientific Principles of Locomotion by Railways.

PUBLIC LECTURES.

Dr. Robert E. Grant, Professor of Comparative Anatomy in the London University	Course of Lectures on the Structure and History of the Invertebrated Classes of Animals.
James Montgomery, Sheffield ..	British Poets.

PRIVATE MEETINGS.

T. Pridgin Teale	Alcyonella stagnorum, a fresh-water Zoophyte inhabiting ponds near Leeds.
William West	The Detection of Arsenic.
John Wilkinson	A Rejoinder to a former Paper on Music.

1836-37.

Rev. J. Holmes, President ..	The Origin of Ancient Greek Tragedy.
Mr. Sulist	Education and the Educational Wants of the Town of Leeds.
Rev. Charles Wicksteed ..	The Il Bruto Secondo of Alfieri and Julius Caesar of Shakespeare.
Edwd. Nevins	The Origin of the Ancient Britons.
Wm. Wildsmith	The Philosophy of Opinion.
W. A. Jackson	The Messenian Wars.
John Atkinson	Thoughts on Education.
Wm. Hey	The Influence of Climate and Local Circumstances on the Imagination.
William West	Chemical Notation, Isomorphism and Isomerism.
Rev. R. W. Hamilton ..	The Sources and Grounds of History.
H. J. Marcus	The Comparative Advantages of a State of Civilisation and Literature over a State of Barbarism.
Dr. Adam Hunter	The Highlands, and the present Condition of the Inhabitants.

PRIVATE MEETINGS.

E. S. George	The Yorkshire Coal Field.
Wm. Sykes Ward	The Management of the Microscope and the Verification of Microscopic Objects.

*Lecturer.**Subject.*

PUBLIC LECTURES.

Professor Robert E. Grant	..	Course of Lectures on The Structure and History of Fishes, Amphibia and Reptiles.
Mr. Edward Taylor, London	..	Course of Lectures on English Vocal Harmony.
Thos. Nunneley .. ..	..	Course of Lectures on the External Organs of Sensation in Man and Animals.

1837-38.

Rev. R. W. Hamilton, President	..	The Tragic Genius of Shakespeare.
Henry Denny .. ..	..	The Study of the Natural Sciences.
Mr. Robt. T. Stothard, London	..	Art in its Usefulness, or Art as the means of affording Employment to an increased Population.
Professor Smyth, Cambridge	..	The Flight of the King of France and the Royal Family to Varennes in 1791, with remarks.
Professor J. F. W. Johnston, Durham		The Composition of Hatchetine, with general Remarks on the Compounds of Carbon and Hydrogen.
William West .. ..	..	An Account of the Scientific Proceedings of the Meeting of the British Association for the Advancement of Science, held at Liverpool.
Rev. Charles Wicksteed ..	..	The Metaphysical Identity of the leading Theories, as those of Clarke, Wollaston, Bentham and others, on the Grounds of Moral Distinctions.
Rev. R. W. Hamilton, President	..	The Passions of the Human Mind.
J. G. Marshall, Vice-President	..	The Nature of Statistic Enquiries, and their Relations to other Branches of Science, and to the Purposes of Social Improvement.
H. J. Marcus .. ..	..	An Historical Parallel between Queen Esther and Anne Boleyn.
James Montgomery, Sheffield	..	The Imperfections of Historical Records;
Rev. J. Ely .. ..	..	The Hutchinsonian Theory of the Universe.
J. P. Sanderson .. ..	..	What is War ?

PRIVATE MEETING.

J. G. Marshall, Vice-President	..	The Desirableness of the Formation of Sections for the collection of Information in particular branches of Science, more especially in Statistics and Geology.
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PUBLIC LECTURES.

Professor R. E. Grant	A Course of Lectures on The Structure and History of Birds and Quadrupeds.
Professor Johnston .. ..	..	A Course of Lectures on Geology.
B. R. Haydon .. ..	..	A Course of Lectures on Painting.

<i>Lecturer.</i>		<i>Subject.</i>
1838-39.		
Rev. R. W. Hamilton, President		The Olympic Games.
Dr. Adam Hunter		The Ancient British Games
Samuel Hare		The Dispositions and Mental Endowments of Man.
Thos. Nunneley		An Inquiry into the Identity of Instinct and Reason, and how far they are dependent upon the greater or less Development of a Central Nervous Mass.
Wm. West, Vice-President		The Requisite Arrangements for a Meeting of the British Association in Leeds.
Wm. Osburn		Animal Magnetism.
Rev. Charles Wicksteed, B.A.		Sergeant Talfourd's Plays and Modern Imitations of the Ancient Drama.
Dr. Mayne		Respirable Air and its uses in the maintenance of the Human Economy and on the injurious Effects of Inhaling Air that is Vitiated or Non-respirable.
J. G. Marshall		The Importance and Advantage of a regulated System of Colonisation.
T. Pridgin Teale		The Cephalopoda.
John Wilkinson		The Retroactive Influence of Language upon Thought.
J. H. Shaw, Vice-President		The Theory of Circumstantial Evidence.
R. D. Chantrell		An Historical Account of the late Parish Church of Leeds, with some Observations relative to the Ancient Fragments discovered during the Removal of various Parts of the Building.

PRIVATE MEETINGS.

Rev. R. W. Hamilton, President		The Auxiliaries of the Future Tense in the English Verb.
Wm. Sykes Ward		The Oxy-hydrogen Microscope.

PUBLIC LECTURES.

B. R. Haydon		A Course of Lectures on Painting.
Edward Taylor, Gresham Professor of Music.		The Early English Opera.

1839-40.

Rev. R. W. Hamilton, President		The Classical Comedy compared with that of Shakespeare.
Thos. Nunneley		The Identity of Matter.
Mr. Rodgers		The Spirit of Modern Philosophy.
J. I. Ikin		The Study of Antiquities in connexion with Science and the Useful Arts.
Robert Baker		The Statistical Condition of the People.
Rev. G. A. Poole, M.A. ..		The Limits of Possible Knowledge.
W. Sykes Ward		Light.
H. J. Marcus		Goethe's Faust.
J. A. Boyes		The Literature of Portugal and more especially the Writings of Camoens.
William West		Hints on Steam Engine Boilers, Locomotive Engines and Railways.
R. D. Chantrell		Italian Architecture.
Dr. Charles Chadwick ..		Certain Atmospheric Phenomena.

<i>Lecturer.</i>	<i>Subject.</i>
Dr. Kennion, Harrogate ..	.. The Connexion between the Animal and Vegetable Kingdoms, as displayed in the Analogy of their Structure and Functions, and their Mutual Subserviency.

PUBLIC LECTURES.

A Course of Lectures on—

B. R. Haydon ..	.. The History of Painting.
Professor Johnston ..	.. Organic Chemistry.

1840-41.

Dr. Adam Hunter, President	.. The British Universities.
Rev. J. Cameron, Wakefield	.. Keats' Poetry.
Rev. G. Ayliffe Poole, M.A.	.. The Philosophy of Bishop Berkeley.
J. I. Ikin ..	.. Venice.
Rev. John Ely ..	.. The Capabilities of the Globe which we inhabit.
Christopher Kemplay ..	.. The Phases of Comets.
Hamilton Richardson ..	.. The Effect of Social Influences on the Poetry of England.
Dr. Pyemont Smith ..	.. Lamertine and his Works.
Samuel Bailey ..	.. Cursory Observations on some of the Changes which have taken place in the English Language.
Samuel Shaen ..	.. Ethics in Olden Time.
Mr. Braithwaite ..	.. Animal Mechanics.
J. A. Boyes ..	.. The Characteristics of Spanish Literature.

PUBLIC LECTURES.

A Course of Lectures on:—

Mr. Espey, Philadelphia ..	.. Metereology.
H. Goadby ..	.. The Structure and Functions of Insects.

1841-42.

Dr. Adam Hunter, President	.. The Scottish Universities.
W. Osburn ..	.. The Psychology of Ancient Egypt, as illustrated by the Inscriptions on the Mummies in the Museum.
Rev. Dr. Scoresby, F.R.S.	.. Illustrations of Magnetic Phenomena and Original Discoveries in Magnetism.
Rev. C. Wicksteed, Vice-President	.. The History of the Woollen Manufacture.
William Sykes Ward ..	.. The Atomic Composition of Matter.
H. J. Marcus ..	.. The Character and Writings of Lessing.
Rev. R. W. Hamilton ..	.. The Claims of the Inferior Animals.
J. I. Ikin ..	.. The Geological Features of the Swiss Alps, with Remarks on the most recent Theories as to the Formation of Glaciers, Moraines and Erratic Blocks.
Wm. West ..	.. A Review of some Portions of Professor Whewell's Philosophy of the Inductive Sciences.
R. D. Chantrell ..	.. Gothic Architecture.

PUBLIC LECTURES.

Edward Taylor A Course of Lectures on The Vocal Harmony of the different Italian Schools.
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<i>Lecturer.</i>		<i>Subject.</i>
Mr. Addams A Course of Lectures on Electro-Dynamics, Electro-Magnetic Telegraphs, Electro-Metallurgy, and the Solidification of Carbonic Acid.

1842-43.

J. H. Shaw, President .. ..	.. ..	.. Capital Punishments.
Mathew Hall .. ..	.. ..	.. The Influence of Locality, as conducive to Longevity.
Rev. R. W. Hamilton .. ..	.. ..	.. The Crusades.
Rev. Wm. Thorp, A.M. .. ..	.. ..	.. The Valley Formations of the Yorkshire Coal Field and the Discoveries made in the Yorkshire and Lancashire Coal Districts.
Charles Sangster .. ..	.. ..	.. The Properties of Fluids.
John Atkinson .. ..	.. ..	.. Hydropathy.
Samuel Shaen .. ..	.. ..	.. The Progress of Man.
Rev. Dr. Wolff .. ..	.. ..	.. The Life and Death of Mohammed.
Mr. — Chapman .. ..	.. ..	.. The Principles of Colonisation.
Robert Hall, A.M. .. ..	.. ..	.. The Forensic Advocacy of the Athenians.
R. D. Chantrell .. ..	.. ..	.. The Geometric Principles of Gothic Architecture.
Mr. Hervie .. ..	.. ..	.. Observations on the present state of Greece and Turkey, derived from a personal residence in those countries.

PUBLIC LECTURES.

		Course of Lectures on—
Thos. Nunneley .. ..	.. ..	.. The Anatomy and Physiology of the Organs of Digestion, Circulation and Respiration.
Sheridan Knowles .. ..	.. ..	.. Dramatic Literature.
Professor Kidd .. ..	.. ..	.. China.

1843-44.

J. Hope Shaw, President .. ..	.. ..	.. The Origin, Progress and Present State of the English Jury System.
Dr. R. S. Hopper .. ..	.. ..	.. Is Phrenology to be considered a Science ?
Dr. Charles Chadwick .. ..	.. ..	.. Halos, Asteroids, etc.
Rev. John Ely .. ..	.. ..	.. The Character of Richard III.
Professor Taylor .. ..	.. ..	.. The Music of the English Church.
Michael Talbot Baines .. ..	.. ..	.. Some of the most interesting Passages in the History of English Criminal Jurisprudence.
W. Sykes Ward .. ..	.. ..	.. Combustion.
Dr. Drennan .. ..	.. ..	.. The Significance of the Senses.
Rev. R. W. Hamilton, LL.D., D.D. .. ..	.. ..	.. Rhyme considered as an Element of Poetry.
J. I. Ikin .. ..	.. ..	.. The Voice, or the Structure and Functions of the Vocal Organs.
Nevins Compton .. ..	.. ..	.. Architecture as a Fine Art.
Rev. Wm. Sinclair, A.M. .. ..	.. ..	.. The Present State of India.
Rev. Wm. Thorp, B.A. The Geology of the Town of Leeds and its Neighbourhood.

PUBLIC LECTURES.

Professor Taylor Early Music of the English Church.
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*Lecturer.**Subject.*

1844-45.

John Hope Shaw, President	The History and Effects of the Feudal System in England.
Martyn J. Roberts, F.R.S.E.	..	..	The Recent Application of Electricity to the Arts.
Arthur Lupton, Junr.	..	..	The Nations which have Conquered and Colonised England.
J. I. Ikin	..	..	The Education and Recreation of the Physical Powers.
W. Sykes Ward	..	..	The Vibrations of Musical Tones.
Rev. Wm. Sinclair, A.M.	..	..	The Physical and Intellectual Nature of Man as adapted to the present World.
Rev. Dr. R. W. Hamilton	..	..	The Historic Epoch of Ferdinand and Isabella of Spain.
Dr. Charles Chadwick	..	..	Prognostics in Meteorology.
Hamilton Richardson	..	..	The Wars of the Fronde.
Dr. John D. Heaton	..	..	The Relations between Animal and Vegetable Organisations.
John Boyes	..	..	The Characteristics of Spanish Literature.

PUBLIC LECTURES.

Thomas Nunneley	..	..	A Course of Lectures on The Structure and Functions of the Brain and Nervous System in Man and the Inferior Animals.
William West	..	..	A Course of Lectures on Chemical Analysis.

1845-46.

Rev. W. Sinclair, A.M., President	..	..	The Rise and Progress of Constitutional Liberty in Ancient Rome.
W. H. Leathem	..	..	The Rise, Growth, Maturity and Prosperity of English Literature.
Rev. C. Weidemann	..	..	The General, as distinguished from the Professional, Advantages of a Classical Education.
Rev. John Ely	..	..	Etruscan Antiquities.
Joseph Holmes, B.A.	..	..	The Revolution of 1688, considered especially with reference to the Conduct and Character of King William III.
Christopher C. Kemplay	..	..	The Past and Present Modes of Inter-course.
Dr. J. D. Heaton	..	..	Mistaken Aims at Health and Longevity.
Rev. C. Wicksteed, B.A.	..	..	The Characteristics of Writers on the French Revolution—Hazlitt, Scott, Smythe, Carlyle, Thiers.
W. Sykes Ward	..	..	The Comparative Advantages of the Methods of applying Locomotive Power on Railways, particularly as regards the Atmospheric System.
Thomas Dykes, Hull	..	..	The Varied Appearance of the Heavens as viewed from several of the Planets in the Solar System.
Rev. Thomas Nunns, A.M.	..	..	The Capture of Constantinople, and its Effects on Society in Europe.
Rev. C. Sangster, A.M.	..	..	The Character of the Athenians.
Rev. Dr. Scoresby, F.R.S.	..	..	Telescopes, especially the Earl of Rosse's gigantic instruments.

<i>Lecturer.</i>		<i>Subject.</i>
PUBLIC LECTURES.		
Charles Kemble .. ..	..	Five Readings from Shakespeare.
Rev. Dr. Wolff .. ..	..	Three Lectures on "The Recent Expedition to Bokhara."
Mr. Addams .. ..	..	Five Lectures on The Application of Steam Power and the Atmospheric Principle to Railways.
Signor Bompiani .. ..	..	Two Lectures on Italian Literature.
Lieut. Waghorn .. ..	..	The Overland Route to India.

1846-47.

Rev. W. Sinclair, M.A., President		The Origin of Alphabetical Writing and Printing.
W. Sykes Ward .. ..	..	Some Account of the following Papers which had been read at Southampton : "On Fauvelle's Method of Boring for Artesian Wells," "The Artesian Well on Southampton Common," "The Experiments for the Construction of the Tubular Bridge over the Menai Straits," "The Effect of Water and Lead Pipes," "On the Actinograph and Growth of Plants," "On the Corrosion of Iron Rails," and "On Professor Grove's Experiments on the Decomposition of Water."
Dr. J. D. Heaton .. ..	..	The true grounds of distinction between the Animal and Vegetable Kingdoms, and their near approximation in particular instances.
M. J. Roberts, F.R.S.E. ..	..	Some of the most interesting Facts in Practical Astronomy.
Rev. J. Carter, D.D., Wakefield.	..	Church Music.
W. St. James Wheelhouse	..	Crime, its Sources, Prevention and Punishment.
T. C. Brian .. ..	..	The History of the Middle Classes of Society.
Rev. C. Weidemann, M.A., Huddersfield	..	Self-Culture.
Rev. Foster Rogers, M.A.	..	The Manners and Customs of the Hindoos.
Rev. A. Lupton, Whitby	..	The Character and Writings of Dean Swift.
R. Church .. ..	..	The Ars Mantica, or Divine Magic of the Ancients.

PUBLIC LECTURES.

A Course of Lectures on :—		
C. Cowden Clarke .. ..	..	The Poets of the Guelphic Era.
Sir H. R. Bishop .. ..	..	The Progress of Secular Music at home and abroad in the Seventeenth and Eighteenth Centuries.

1847-48.

Rev. William Sinclair, M.A., President		The Contests between the English and French for Supremacy in India.
Wm. West, F.R.S. .. ..	..	The Comparison between the principal Modern Languages of Europe.

<i>Lecturer.</i>	<i>Subject.</i>
Wm. Blanshard	The Origin and Constitution of Grand Juries in England, and their Effect on the due Administration of Justice in the Criminal Courts.
John Hope Shaw, Vice-President	Capital Punishments.
Rev. R. R. Wolff	The Round Towers of Ireland.
J. Ingham Ikin	The Labours of John Hunter and Cuvier compared
Wm. St. James Wheelhouse ..	The Institution and Spirit of Chivalry, from its Rise to its Extinction.
Rev. Dr. R. W. Hamilton ..	The Philosophy and Expression of the Intellectual Emotions.
W. Sykes Ward	The Recent Improvements in the Electric Telegraph.
Rev. Dr. Holmes, Vice-President	Light, its Properties, Nature, and Application to the Formation and Phenomena of the Rainbow.
Dr. Simpson, Pontefract ..	Reason and Instinct, and their Connexion with the Nervous System.

PUBLIC LECTURES.

Four Lectures on :—

Dr. W. B. Carpenter, F.R.S.	.. The Revelations of the Microscope.
Rev. Dr. Wolff .. ..	.. The Lives of Tamerlane, Ali, and the Grand Llama of Thibet.

1848-49.

Rev. Wm. Sinclair, M.A., President	The Principles of Education—for Professional Men, for Females, and for the Working Classes.
Henry Denny .. ..	.. The Early History and Origin of Coal.
William Boyne .. ..	.. Numismatology, or the Study of Ancient Coins.
Communicated through the President.	Madeira.
J. H. Richardson .. ..	.. The Character of Louis XI.
George Morley .. ..	.. Epidemics and Contagion.
Wm. St. James Wheelhouse ..	.. The Contrast between Ancient and Modern Civilisation, and the probable tendencies of each.
J. I. Ikin .. ..	.. Physiology and Phrenology contrasted.
Rev. C. F. Weidemann, M.A.	.. The Poetry of Gray and Collins.
Dr. J. D. Heaton .. ..	.. The Natural Classification of Plants.
J. A. Boyes .. ..	.. The Discovery and History of the Empire of Brazil.
Reid Corson .. ..	.. The Principles of Design, by which the Moorish Architects were enabled to Invent Features of Architecture, and to Proportion all the Parts of their Buildings.

PUBLIC LECTURES.

C. Cowden Clarke .. ..	.. Course of Lectures on the Subordinate Characters in the Plays of Shakespeare.
Miss Kelly .. ..	.. Two Readings from Shakespeare, "The Merchant of Venice" and "Othello."
Rev. Wm. Sinclair, M.A., President	Three Lectures on Scottish Poetry, up to the close of the Eighteenth Century.

<i>Lecturer.</i>	<i>Subject.</i>
Martin Cawood	Four Lectures on English Ballads, Songs and Song Writers, to the close of the Eighteenth Century.
W. Sykes Ward	Four Lectures on Electricity and Magnetism.
Dr. J. D. Heaton	Four Lectures on The Natural Classification of Plants.

1849-50.

W. Osburn	Address by the President. Paper on "The Monumental History of Egypt."
E. W. Brayley, London ..	The Philosophy of the Choice of Building Stones.
Rev. Wm. Sinclair, M.A., President	The Relations of Science and Archaeology with Religion.
C. L. Dresser	The Construction of Voltaic Batteries, as applicable for the Production of Electric Light.
Rev. Edward Higginson, Wakefield	The Philosophy of Shall and Will.
Wm. Boyne, communicated by Mr. Spence, Devonport ..	Some of the British and Mediaeval Antiquities of Cornwall.
Rev. C. F. Weidemann, A.M., Wakefield	The Marks of Civilisation.
Rev. C. Wicksteed, B.A. ..	Our Estimate of the Iliad in Youth and Maturity.
Rev. Wm. Sinclair, M.A., President, founded on a Communication from the Rev. Dr. Wolff.	The Second Stage of Mahommedanism.
C. W. Burleigh	On Form.
Rev. H. R. Reynolds	The Results of the Life and Teaching of Plato.
Wm. St. James Wheelhouse ..	The Life, Genius and Writings of Cervantes.

PUBLIC LECTURES.

E. W. Brayley	Four Lectures on Recent Investigations and Discoveries in several Departments of Science, relating to the Physical Structure of the World, and the Mutual Relations of Geology, Astronomy, and Meteorology.
Miss Kelly	Four Readings from Shakspeare :— "Hamlet," "Twelfth Night," "Macbeth," and "As You Like It."
Rev. W. Sinclair, M.A., President	Three Lectures on Scottish Poetry.

1850-51.

Rev. Wm. Sinclair, M.A., President	The Archaeological Discoveries in Assyria.
Bethel Jacobs, Hull	The Probable Forms of the Musical Instruments named in the Scriptures, with Remarks on Hebrew Music.
Dr. J. D. Heaton	The Philosophy of Apparitions.
Thomas Nunneley	The Senses and Sensation, but more especially upon the Ideas and Impressions received by the Sense of Vision, and the Qualities of bodies upon which it is Exercised.

<i>Lecturer.</i>	<i>Subject.</i>
Rev. Wm. Newman, Badsworth	The Battle Fields of Towton, Wakefield and Marston Moor.
Thomas Wood	The Reign of Henry VII in connection with our Constitution.
Theodore West	The Speeches of Lord Erskine.
William West, F.R.S.	Explosions in Coal Mines.
Dr. R. Hay, F.R.S.E.	Observations on the Geometrical Principles of Beauty, more particularly as applied to Architecture and the Human Form.
Dr. G. Pyemont Smith	The Detection of Poisons.
J. I. Ikin	The Progress of Public Hygiene and Sanitary Legislation in England, and the Benefits to be derived from its Further Extension.
Claude G. Wheelhouse	A Glance at Egypt and the Nile.
Wm. St. James Wheelhouse	A Parallel View of the Several Characters of Ximenes, Wolsey and Richelieu.
C. L. Dresser	A Comparison of Gothic and Grecian Architecture.

PUBLIC LECTURES.

C. Cowden Clarke	Four Lectures on Chaucer, Spenser, Shakespeare, and Milton.
Rev. Wm. Sinclair, M.A.	Two Lectures on the Poetry of Dryden.
W. Sykes Ward	The Elements of Meteorology.

1851-2.

Rev. C. Wicksteed, B.D., President	Homeric Contrasts of Character, Priam and Nestor; Hector and Paris; Andromache and Helen, &c.
Wm. St. James Wheelhouse	Retrospect, Historical and Critical, of British Progress taken at the close of the last Nine Centuries.
Rev. W. Sinclair, M.A., Vice-President	Sketch of the History of the Fine Arts, with a view to ascertain the best means of promoting their progress.
C. L. Dresser	The Adulteration of Articles of General Consumption.
C. G. Wheelhouse	Reminiscences of Syria.
Wm. Bruce	Froissart and his Chronicles.
Rev. Edward Higginson, Wakefield	The Phonetic Orthography, Theoretically and Practically viewed.
Rev. C. F. Weidemann, Wakefield	Some of the Mutual Relations of History and Geography.
Thomas Wood	An Enquiry into some of the Customs and Institutions of our Early History.
William Blanshard	The Genius and Poetry of Lord Byron.

PUBLIC LECTURES.

C. Cowden Clarke	Four Lectures on the Comic Writers of England.
Mrs. Fanny Kemble	Four Readings from Shakespeare— "Macbeth," "Midsummer Night's Dream," "Romeo and Juliet," "King Lear."

<i>Lecturer.</i>		<i>Subject.</i>
1852-53.		
Rev. Charles Wicksteed, B.D., President		The Literary Styles of Great Military Commanders Xenophon, Caesar, Napoleon, Wellington.
T. Pridgin Teale .. ..	..	The Fossil Fishes of the Yorkshire Coal-field.
Rev. Prof. Sedgwick, Cambridge		The Comparative Anatomy of the Megatherium, and other large Fossil Edentata.
P. Boyce .. ..	..	The distinguishing characteristics of the various styles of Architecture.
Thomas Scattergood ..	..	The Relations of Life to Physical Laws.
W. S. Ayrton, F.S.A. ..	..	Wit—its Definition and Illustrations.
C. G. Wheelhouse .. ..	..	Further Reminiscences of Syria.
Rev. Charles Wicksteed, B.D., President		Paper on the Principal Deceased Leeds Artists.
Rev. J. Kenrick, M.A., York	..	The Causes which have Retarded the Civilisation of Africa.
Rev. H. R. Reynolds ..	..	Some of the Scientific and Practical Applications of the Doctrine of Probabilities.
C. L. Dresser .. ..	..	The Distribution of Metals in the Earth.

PUBLIC LECTURES.

Theodore West .. ..	..	The Curiosities of Analytical Chemistry.
Mrs. Fanny Kemble ..	..	Four Readings from Shakespeare— "Anthony and Cleopatra," "Twelfth Night," "Merry Wives of Windsor," and "Hamlet."

1853-54.

Rev. Wm. Sinclair, M.A., Vice- President		The Effects produced by an Enhancement or Depreciation of the Currency.
Rev. A. H. Blythe .. ..	..	Thought and Action.
T. Pridgin Teale .. ..	..	The Aire Valley and its Organic Remains.
R. Monckton Milnes, M.P.	..	The Laws of the Progress of Society, as illustrated by present condition of Mankind.
W. S. Ayrton .. ..	..	Laughter.
Dr. J. D. Heaton .. ..	..	Town Halls.
Rev. H. R. Reynolds ..	..	Personal Recollections of Milan and Venice.
W. S. Ayrton .. ..	..	The Life and Writings of Butler.
Robert Hall .. ..	..	A Visit to Mettray.
Wm. Osburn, Junr. ..	..	The Mode of Computing time in Ancient Egypt.
Joseph Knight .. ..	..	The Fairies of English Poetry.
C. Watson .. ..	..	Ventilation.

PUBLIC LECTURES.

Miss Glyn	Four Readings from Shakespeare— "Othello," "King John," "Merchant of Venice," and "Henry VIII."
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JUVENILE LECTURES.

Dr. G. P. Smith	The Laws Regulating the Diffusion of Heat.
W. Sykes Ward	The Atmosphere.

<i>Lecturer.</i>	<i>Subject.</i>
J. I. Ikin	Man's Favourites—The Horse, the Dog, the Cat.
Dr. J. D. Heaton	The Nature and Effects of Chemical Action.

1854-5.

J. H. Shaw	The History of English Municipalities.
C. Cowden Clarke	The Writings of Le Sage.
Rev. Wm. Sinclair, M.A., Vice-President	Oxford.
W. Osburn	Greece.
Christopher C. Kemplay	News: its Channels and Recipients.
Robert Baker	The Criminal Statistics of the Borough of Leeds, for 1852-3.
Thomas Wood	Russia, Geographically, Politically, and Socially Considered.
E. H. Durden	The Chemistry of Manufactures.
E. W. Brayley, F.R.S.	The Relations of the Polarity in the Distribution of Organised Beings in Time, discovered by the late Professor Edward Forbes, to the General Distribution of Organised Beings <i>inter se</i> discovered by Mr. Wm. Sharpe Macleary.
Rev. J. R. Stratten	A Review of Foster's Essay on Decision of Character.
Professor J. F. W. Johnston	The Chemistry of Common Life.
G. Morley	The Causes which influence Health and Disease in Leeds, viz., Climate, Soil, Water, Dwellings, Habits of the People.

PUBLIC LECTURES.

C. Cowden Clarke	Four Lectures on Great European Novelists: Boccacio, Cervantes, Le Sage and Richardson.
E. W. Brayley, F.R.S.	Physical Geography.

JUVENILE LECTURES.

C. G. Wheelhouse	A Child's account of the War in which England and France are at present engaged.
Thos. Scattergood	Food, or what do we live upon.
Thos. Nunneley	On Optics and the Construction of the Eye.

1855-6.

John Hope Shaw, President	The Origin of the English Parliament.
Rev. W. Sinclair, V.P.	Personal Recollections of a Tour in Southern India.
Rev. Dr. Hook	The Life and Character of John Duke of Marlborough.
Sir Joseph Paxton, M.P.	The Growth of London, and other large Towns in the United Kingdom, with suggestions for their better Architectural Arrangements, Internal Communication and Sanitary Improvements.

<i>Lecturer.</i>		<i>Subject.</i>
Rev. G. W. Conder ..	..	Man and Nature.
Henry C. Sorby, Sheffield	..	The Currents produced by the Action of the Winds and Tide; also the Structures formed in the Deposits accumulated under their influence, which enable us to determine the Physical Geography of the Seas at various Geological epochs.
Rev. A. Barry .. ..	..	The State of the Controversy as to the Plurality of the Worlds.
Robert Hall .. ..	..	Some attempts to Discover a System of Reformation for adult Criminals.
Dr. G. P. Smith .. ..	..	Notes from Scutari.
Rev. Thos. Hincks, B.A. ..	..	Zoophytes, their Structure and Economy.
R. Harrison .. ..	..	Books and Book-Collectors.

PUBLIC LECTURES.

C. Cowden Clarke	Four Lectures on the Genius and Writings of Molière.
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JUVENILE LECTURES.

W. Sykes Ward	Two Lectures on Photographic Chemistry.
— Durden	The Chemistry of War and Peace.

1856-7.

John Hope Shaw, President ..	..	The English Parliament from the Reign of Edward First to the Revolution of 1688.
Rev. Wm. Sinclair, Vice-President	..	The Jacobite and Lowland Poetry of the 18th Century.
Rev. C. E. Moberley .. ..	..	The Life and Times of Frederick the Great.
P. O'Callaghan .. ..	..	Autographs—their Collection, and connection with History.
Rev. Thos. Hincks, B.A. ..	..	The Encrinite and its Kindred.
Wm. Osburn .. ..	..	The Epigrams and Epigrammatic Writings of the beginning of the 18th Century.
Rev. Dr. Hook .. ..	..	The Life and Character of Queen Elizabeth.
Sir Henry E. L. Dryden, Bart. ..	..	Music.
Rev. W. Whewell, D.D., Master of Trinity College, Cambridge.	..	Plato.
Rev. A. Barry, M.A. .. ..	..	The Life and Times of Charlemagne.
Rev. J. T. B. Landon, M.A. ..	..	Homer.

PUBLIC LECTURES.

Dr. Sandwith, C.B., late Inspector-General of the Medical Dept. of the Turkish Army at Kars.	..	The late Campaign in Asia Minor, with special reference to the Siege of Kars.
Waterhouse Hawkins .. ..	..	Two Lectures on the Dinosaurians of Great Britain and the Pachyderms and Megatheroids of the Tertiary Periods.

JUVENILE LECTURES.

Wm. Sykes Ward .. ..	..	Two Lectures on Chemistry and the Phenomena of Light and Colour.
Henry Denny .. ..	..	Habits and Habitations of the Spider Family.

*Lecturer.**Subject.*

PAPERS READ AT ANNUAL CONVERSAZIONE.

E. Baines .. ..	..	An Alpine Panorama—Monte Rosa and the Matterhorn.
Rev. F. W. Chapman ..	..	An account of the Manners, Habits, and Religion of the Natives of New Zealand, from personal observation.
Rev. Thos. Hincks, B.A. ..	..	The Paper Nautilus, and its Story.
Richard Reynolds .. ..	..	A Novel Application of Amorphous Phosphorus.

1857-8.

J. G. Marshall, President ..	..	The Geology of the Lake District.
W. E. Forster .. ..	..	The Mogul Dynasty in India.
Rt. Hon. Lord Monteagle ..	..	Observations on the Town and Country System, as exemplified in the Social and Economical Condition of the People.
Rev. Wm. Sinclair, M.A. ..	..	Macbeth.
E. B. Denison, Q.C. ..	..	Public Clocks.
Rev. W. Whewell, D.D., F.R.S., Master of Trinity College, Cam- bridge	..	Plato.
Rev. Dr. Hook .. ..	..	The Effects of the Crusades.
Rev. Edward Trollope, M.A. ..	..	The Captivity of John, King of France, in England.
E. M. Barry, London ..	..	Notes on English Architecture.
E. B. Wheatley Balme ..	..	A Prevailing Fallacy in the use of the term Education.
Rev. Alfred Barry, M.A., Vice- President	..	St. Louis and his Times.
Viscount Goderich, M.P. ..	..	The History of India.
Thomas Marshall, M.A.	The Influence of Local Causes in Determining National Character.

PUBLIC LECTURES.

W. E. Forster	The Condition of India under British Rule.
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PAPERS READ AT ANNUAL CONVERSAZIONE.

Thos. Nunneley	A Biographical Sketch of Laura Bridgeman.
P. O'Callaghan .. ..	..	A short account of the Historical Facts connected with the Letters exhibited.
W. Sykes Ward .. ..	..	Explained the process by which Milk is converted into Powder—the Desiccated Milk of Commerce.
Rev. Thomas Hincks, B.A. ..	..	A Description of the Telegraphic Plateau in the North Atlantic.

1858-59.

Sir John F. W. Herschel, Bart. ..	..	Sensorial Vision.
Very Rev. W. F. Hook, D.D., Dean of Chichester, President	..	The Objects and Importance of Philosophical and Literary Societies.
W. S. Ayrtton .. ..	..	Bells.
J. Crawford, F.R.S... ..	..	The Conditions which Promote the early Civilization of Man.
Rev. Edward Trollope, M.A. ..	..	Mazes and Labyrinth.

<i>Lecturer.</i>	<i>Subject.</i>
T. W. Atkinson	A short account of the Steppes and Plains of Central Asia, and the Nomade Tribes inhabiting them.
J. L. Hannay	Sir Walter Scott.
Rev. H. R. Reynolds	Buddhism and its Pilgrimages in the Seventh Century, A.D.
E. M. Barry	Sir Christopher Wren and his Times.
James Yates, Statician (read by T. W. Stansfeld)	Illustrations of the Metrical System of Weights and Measures.
Rev. A. Barry, M.A., Vice-President	Civilisation, and some recent Theories thereon.
T. Wright, Member of the Institute of France	The Sources of English History.
Rev. Wm. Sinclair, M.A. . .	The State and Prospects of England considered in connection with the National Character.

PUBLIC LECTURES.

H. Martineau Greenhow, a Military Medical Officer of the Indian Army	The Siege of Lucknow.
J. Crawford, late Governor of Singapore	China and its Trade.

JUVENILE LECTURES.

R. P. Williams	The Electric Telegraph.
W. Sykes Ward	Two Lectures on the Chemistry and Preparation of Food.
Thos. Nunneley	Four Lectures on Light, the Eyes of Animals, and the Phenomena of Vision.

PAPERS READ AT ANNUAL CONVERSAZIONE.

Edward Hailstone	Description of the History and Process of Enamelling, illustrated by curious specimens selected from his own collection.
Richard Reynolds	Description of the newly discovered mode of making parchment from paper.

1859-60.

Rev. Robert Walker, F.R.S., Reader in Experimental Philosophy in the University of Oxford	The Induction Coil, and the Electrical Discharge in Vacuo.
Rev. Alfred Barry, M.A., President	The Influence of the Imagination in Individual and Social Development.
Sir J. F. W. Herschel, Bart., K.H., F.R.S.	Volcanoes and Earthquakes.
Very Rev. W. F. Hook, D.D., Dean of Chichester.	The Products and Prospects of England.
Wm. Hopkins, F.R.S.	The Production and Propagation of Sound and Light, and the Analogies between Elementary, Acoustical, and Optical Phenomena.
Capt. Drayson, Royal Artillery, Professor of Practical Astronomy at the Observatory, Woolwich	The Third Motion of the Earth, examined in connection with Astronomical, Geological and Historical Evidences.

<i>Lecturer.</i>	<i>Subject.</i>
Right Rev. the Lord Bishop of Ripon	The Physical Condition of the People, in its bearing upon their Social and Moral Welfare.
Laurence Oliphant, F.R.S., Secretary of Legation to Lord Elgin's Mission to China and Japan	Our Political and Commercial Relations with China and Japan.
Sir John Bowring, late Governor of Hong Kong	China, as Influenced by and Influencing Civilisation.
Wm. Fairbairn, F.R.S. 	The Properties of Steam and its application.
Rev. F. G. Fleay 	The Metaphysical Theory of Volition, and certain Systems recently proposed on the Subject.
Wm. Crawford, F.R.S. 	The Horse : its History and its Uses for Military and other purposes.
Thomas Marshall, M.A. 	Modern Novelists, especially with reference to the works of Charles Dickens.
Thomas Wright 	The Recent Discoveries in Excavating in the Remains of the ancient town of Uriconium, near Shrewsbury.

JUVENILE LECTURES.

W. Sykes Ward 	The Scientific Construction and Use of the Rifle.
— Dunderdale 	Two Lectures on Elementary Chemistry.

PAPERS READ AT ANNUAL CONVERSAZIONE.

Henry Denny 	The Geological and Archaeological contents of the Craven Caves.
Richard Reynolds	A New Method for rendering Textile Fabrics non-inflammable.

1860-61.

Prof. H. D. Rogers, of the University of Glasgow	Coal and its Uses.
Rev. Alfred Barry, M.A., President	The Tudor Period and its recent Historians.
P. O'Callaghan 	The Pre-Historic Condition of the British Islands, and their Inhabitants.
Capt. Blakely, Royal Artillery (Several of the Volunteer Rifles were present by special invitation on this occasion)	The Recent Improvements in Fire Arms.
— Bloxham 	Kirkstall Abbey.
Capt. Sherard Osborn, R.N.C.B. ..	Northern China considered Geographically and Commercially.
Prof. H. D. Rogers	The Reported Traces of Primeval Man.
Rev. Prof. Temple Chevalier, of the University of Durham	The Recent Total Eclipse of the Sun as observed in Spain.
Rear Admiral Sir Edward Belcher, C.B., Distinguished Arctic Navigator	The Nations inhabiting the Arctic Regions of North America; their habits, customs, weapons, implements, &c., &c.
Rev. Thos. Hincks, B.A. 	The Story of a Life.
Rev. Edward Monro, Vicar of St. John's, Leeds	Tennyson's "Idyls of the King," as applied to the present Condition of English Society.

<i>Lecturer.</i>	<i>Subject.</i>
T. Marshall, M.A.	Progress and Improvement, their Relations and Contrasts.
Prof. Robert Hunt, F.R.S., of the Government School of Mines	The Phenomena of Mineral Lodes.

PAPERS READ AT ANNUAL CONVERSAZIONE.

Prof. Seyffarth, of St. Louis, U.S.A.	The Leeds Mummy.
Thos. Stansfeld, for Edmund Waterton, of Walton Hall	The Wedding Ring.

JUVENILE LECTURES.

Richard Reynolds	A course of Lectures on Our Food from Plants.
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1861-62.

Dr. Mouat, Her Majesty's Inspector-General of Prisons in the Bengal Presidency of India	A Narrative of a Government Expedition to Explore the Andaman Islands, with an Account of the Country and its extraordinary Inhabitants.
Mons. P. B. Du Chaillu	Travels in Equatorial Africa, and the Gorilla Country.
Capt. Cameron, Her Majesty's Consul in the Caucasus (read by P. O'Callaghan)	The Geography, Ethnology and Commerce of the Caucasus.
Rev. John Kenrick York	The Historical Traditions of Pontefract Castle, with an enquiry into the evidence of the Death of Richard II. within its walls.
Prof. Allen Dalzell, of Edinboro'	The recent Spectrum Discoveries of Kirchoff and Bunsen, and their application.
Prof. Henry Hennessy, F.R.S., Dublin	The Relations of Science to Modern Civilisation.
Prof. John Connington, Oxford	His own translation of the Fourth Book of the Aeneid of Virgil.
Rev. Alfred Barry, M.A.	The Historical and Philosophical value of the Study of Language.
John Lubbock, F.R.S.	The Recent Geologico-Archaeological Discoveries in Denmark, Switzerland, and France.
Rev. J. B. Reade, F.R.S.	Polarized Light.
Major-General Chesney, R.A., F.R.S.	The Primeval Cities of the World.
Professor Hopkins, Cambridge	The Motion of Glaciers.

JUVENILE LECTURES.

Dr. T. Clifford Allbutt, M.A.	A Course of Lectures on the Forms of Plants and Animals.
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1862-63.

T. Pridgin Teale, F.R.S.	Some Objects of interest peculiar to our Museum.
Sir Rutherford Alcock, Her Majesty's Minister at Japan.	Japan.
John Scott Russell, F.R.S.	The Iron Navy of England.

*Lecturer.**Subject.*

Sir Charles Nicholson, Bart., D.C.L., LL.D., late Speaker of the House of Assembly and Chancellor of the University of Sydney	Australia, its present state and prospects.
Rev. Thomas Hincks, B.A., Vice- President	The Plan of Life.
Sir Harry Parkes, K.C.B., Her Majesty's Consul in China	China, its present state and relations with Europe.
Prof. Pepper, the well-known Lecturer at the Royal Poly- technic Institution of London	The Progress of Modern Science, as illustrated by the late International Exhibition.
George Gilbert Scott, R.A. ..	Gothic Revival, the true ground work of a distinct Architectural Style.
Cyril Graham, B.A.	The Ancient Cities of Og, in the land of Bashan.
Dr. T. Clifford Allbutt, M.A. ..	Physiognomy.
Major General Chesney, F.R.S. ..	The Primeval Cities of the World.

PUBLIC LECTURES.

James Glaisher, F.R.S., of the Royal Observatory of Green- wich	A Graphic Account of his recent Balloon Excursions for the purpose of Meteoro- logical Observations.
Professor Richard Owen, F.R.S.	A Course of four Lectures on Subjects of Natural History and Palaeontology.

PAPERS READ AT ANNUAL CONVERSAZIONE.

Professor Richard Owen, F.R.S.	Inaugural Address on Opening of New Hall.
T. Pridgin Teale, F.R.S., President	Some Objects of interest peculiar to our Museum.

1863-64.

Rev. T. Hincks, B.A., President ..	The Relation of the Philosophical and Literary Society, and Kindred Institu- tions, to the Intellectual Wants of a large Manufacturing and Commercial Town.
E. W. Brayley, F.R.S.	The Physical Constitution of the Sun.
Alfred R. Wallace	The Varieties of Man in the Malay Archipelago.
T. Marshall, M.A.	Roger Bacon; his Life and Works.
Rev. W. C. Lukis, Wath Rectory, Ripon	Primaeval Sepulture.
Prof. Robert Harkness, F.R.S. ..	The Geology of the North of England.
Rev. Canon Trevor, York	The Pyramids of Egypt.
Dr. Charles T. Beke	The Sources of the Nile, and on the main requisites for their final determina- tion.
Francis Galton, F.R.S.	The Early Domestication of Animals.
Dr. George Rolleston, F.R.S., Professor of Anatomy in the University of Oxford	The Unity of the Human Species.
Thomas Wright, Corresponding Member of the Institute of France.	The History of Leeds before the Norman Conquest.

*Lecturer.**Subject.*

JUVENILE LECTURES.

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| Mr. Dodwell, Manchester .. | .. | Two Lectures on the History and Progress of the Electric Telegraph. |
| Prof. D. T. Ansted, F.R.S. | .. | Four Lectures on the following subjects :
The Influence of Water in Forming Rocks. The Influence of Water in Modifying Rocks. Granite, its Origin and History. The Early Races of Men, and their Contemporaries. |

1864-5.

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| Dr. Grace Calvert, F.R.S. | .. | Some of the Benefits which Arts and Manufactures have derived from Chemistry. |
| Very Rev. W. F. Hook, D.D., Dean of Chichester. | | The Doctor Profundis. |
| Rev. T. R. Green, M.A., London .. | .. | St. Cuthbert. |
| Rev. H. B. Tristram, LL.D., F.R.S. | .. | The Holy Land in its Natural Aspects. |
| Edward Atkinson | .. | The Subterranean Explorations in Jerusalem. |
| Lord Viscount Milton and Dr. Cheadle | | The Red River Settlement and other British North American Possessions. |
| Rev. C. H. Hartshorne | .. | The Scottish Borders. |
| Dr. J. D. Heaton | .. | Force; its Transformations, its Indestructibility, and its Origin. |
| Dr. Antonio Salviati | .. | Mosaics; their Origin, Different Kinds, and Progressive Development; and the Introduction of Enamel-Mosaic into England. |
| Prof. Max Muller | .. | The Vedas, or the Ancient Sacred Books of the Brahmins. |
| J. Scott Russell, F.R.S. | .. | Modern Means for Naval War. |
| Rev. Dr. Henderson | .. | The Names of Places in the British Islands and North-West of France. |
| Dr. Rae, R.N. | .. | The Arctic Regions. |

1865-66.

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| Rev. Churchill Babington, B.D., Fellow of St. John's College, and Disney Professor of Archaeology in the University of Cambridge. | | Greek Fictile Vases. |
| Captain Pim, R.N. | .. | Some Account of the New World Isthmus. |
| John Evans, F.R.S. | .. | The Stone Implements of Antiquity, with especial reference to those from the Drift. |
| Dr. Edward Charlton, Newcastle .. | .. | The Runic Inscriptions of Great Britain; their Relations to History, Poetry and Romance. |
| Prof. George Rolleston, F.R.S. .. | .. | The Distribution of Species. |
| Prof. T. C. Archer, F.R.S.E., Director of the Industrial Museum of Scotland | | The Application of Animal Materials to the Wants of Man. |
| Rev. J. T. B. Landon | .. | Oxford in the Olden Time. |
| Dr. J. H. Gladstone, F.R.S. | .. | Recent Discoveries on the Refraction of Light. |
| Prof. Robert Hunt, F.R.S. | .. | The Physics of the Sun. |

*Lecturer.**Subject.*

Arminius Vambery, Professor of Oriental Languages in the University of Pesth	Some of the most dangerous Moments of my Disguise.
Frank Buckland	The Cultivation of Oysters and Salmon by Natural and Artificial Means.
Professor Phillips, LL.D., F.R.S., Oxford	The Physical Geography of Yorkshire.
Thomas Fairley, Lecturer on Chemistry, Leeds School of Medicine.	The Atmosphere, its Chemistry.

1866-67.

Dr. Charles Chadwick, President of the Society	A Correct Estimate of Facts the real Basis of Science.
Dr. George Murray Humphrey, F.R.S., Professor of Anatomy in the University of Cambridge	Life and Death.
Dr. John Birkbeck Nevins, Liverpool	The World as the Dwelling-Place of Living Beings, and not a Lifeless Globe.
R. H. Major, Hon. Sec., R.G.S. ..	Sindbad the Sailor.
Dr. Kinkel, Professor at the Federal Polytechnicum of Zurich	Greek Art, especially Architecture.
Do.	Do. Sculpture.
H. T. Stainton, London	The Habits and Transformation of Insects.
Dr. Beke	Abyssinia.
Rev. H. B. Tristram, LL.D., F.R.S.	Palestine, East of Jordan, <i>i.e.</i> , Gilead and Bashan, Historical and Descriptive.
Rev. William Greenwell, Canon of Durham	The Inhabitants of Yorkshire in Pre-Roman Times.
John Wilson, F.R.S.E.	The Atmosphere and its Effects.
Rev. J. T. B. Landon	The Signs of Hotels and Shops; their Origin, etc.
Dr. Robert Gordon Latham, F.R.S.	The Ratio of the Brain and Intellect in Man and Brutes.

JUVENILE LECTURES.

C. G. Wheelhouse	Creative Design, as illustrated by the Structure of the various classes of Skeletons contained in the Museum.
Rev. Thomas Hincks, B.A.	Corals, illustrated by an extensive series of Specimens from the Society's Museum.
Thomas Scattergood	Points of Interest connected with some groups of Minerals in the Society's Museum.

1867-68.

Dr. Lyon Playfair, C.B., F.R.S., Professor of Chemistry in the University of Edinburgh	The Food of Man in relation to his Muscular Force.
Venerable Archdeacon Trollope, D.D.	The Norman Sculpture of Lincoln Cathedral.
Rev. Thomas Jackson, Prebendary of St. Paul's, London	The Dialect of Yorkshire, with illustrative reminiscences of Old Yorkshire Life and Manners.
Do.	Do.

<i>Lecturer.</i>	<i>Subject.</i>
Professor J. E. Archer	The History of Exhibitions and the General Results of those of 1851, 1855 and 1862.
Professor J. E. Archer	The Paris Exhibition; its Leading Features, Social and Scientific, with especial reference to Technical Education.
Alexander S. Herschel, Professor of Astronomy in the University of Glasgow	Meteors and Meteorites.
Dr. Collingwood	Formosa.
P. O'Callaghan, LL.D., D.C.L. ..	Incidents in the Life of our First Prince of Wales (Edward II.) unrecorded in the Histories of England.
Henry Woodward, of the British Museum	Man and the Mammoth.
James Stuart, Trinity College, Cambridge	The Earth, its Shape, Size, Physical Construction and Changes.
Rev. T. S. Fleming, late of Shaw-King, China	The Scientific Ideas of the Chinese.
Alfred R. Wallace	The Climate and Vegetation of the Tropics.
Alfred R. Wallace	The Animal Life of the Tropics.

JUVENILE LECTURES.

Dr. J. D. Heaton, Vice-President	Mount Vesuvius.
J. Chapman Wilson, Lecturer on Chemistry at the Leeds School of Medicine.	Two Lectures on Electricity.

LECTURE GIVEN AT ANNUAL CONVERSAZIONE.

W. F. Barrett, of the International College, London	Sensitive and Musical Flames.
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1868-69.

Dr. J. D. Heaton	Some Recent Observations on the Physiology of Language.
E. W. Brayley, F.R.S.	The Influence of the Telescopic Researches of the late Earl of Rosse on the Progress of Sidereal and Nebular Astronomy.
W. R. Birt	The Mapping of the Surface of the Moon.
Dr. R. Gordon Latham	Certain Questions connected with the Antiquity of the Human Race.
Dr. H. Blanc, late captive in Abyssinia	The Mission to Theodore.
Clements R. Markham	The Abyssinian Expedition.
Rev. Alfred Barry, D.D.	The Battle of the Two Philosophies, Mental and Physical.
Edward Whymper	The Greenlanders, Past and Present.
Rev. Henry Temple	The Faculties of Brutes.
Professor Arminius Vambery	My Ramblings in Persia.
William Spark, Mus. Doc.	The Vocal Music of the Elizabethan and Victorian Eras, compared and contrasted.

*Lecturer.**Subject.*

PUBLIC LECTURES.

Special Course of Lectures illustrative of the National
Exhibition of Works of Art collected in the New Infirmary.

Tom Taylor, M.A. . . . .	.. ..	The Characteristics of Fine Art, Ancient and Modern, English and Foreign.
M. Digby Wyatt . . . . .	.. ..	Art Applied to Industry.
George Redford, Assistant Commissioner		Landscape Art, and its Different Styles, from the time of the Old Masters to the Present Time.
Ralph N. James, Supt. of the Catalogue of Pictures in the Exhibition, delivered by Edward Hailstone		The Portrait Gallery of Yorkshire Worthies.
William Chaffers, Supt. of the Museum of Ornamental Art		Pottery and Porcelain.
J. C. Robinson, Member of the Academy of Fine Arts of St. Luke in Rome		The Ancient Masters considered from Modern Points of View.
B. B. Woodward, Keeper of Prints and Drawings to the Queen		Engravings and Drawings in the Exhibition.
Henry O'Neil . . . . .	.. ..	The Influence of Art, and the Promotion of Taste.

1869-70.

Professor Thomas H. Huxley, LL.D., F.R.S., President-Elect of the British Association		The Ethnology of India.
Rev. Canon Woodford, D.D., Vicar of Leeds		The Remoter Causes of some Historical Events.
Arthur Duke Coleridge . . . . .	.. ..	The Life and Influence of Franz Schubert, with Musical Illustrations.
Rev. W. C. Lukis . . . . .	.. ..	The Pre-Historic Monuments of Brittany.
J. Scott Russell, F.R.S. . . . .	.. ..	Technical Education. What it is, and what it should be, for Masters.
Do. . . . .	.. ..	Technical Education. What it is, and what it should be, for Workmen.
W. F. Barrett, Professor of Natural Philosophy at the International College, London.		Recent Discoveries in Physical Science.
Do. . . . .	.. ..	Do.
Rev. J. H. McCheane . . . . .	.. ..	The Poetry of Robert Browning.
Rev. C. P. Eden . . . . .	.. ..	The Comus of Milton.
Edward Filliter . . . . .	.. ..	The Sewage Question.
William Huggins, F.R.S. . . . .	.. ..	The Results of Spectrum Analysis as applied to the Heavens.
William Huggins, F.R.S. . . . .	.. ..	The Results of Spectrum Analysis as applied to the Heavens. Second Lecture.
Dr. J. E. Eddison . . . . .	.. ..	Sleep and Dreams.
William Farr, M.D., F.R.S., D.C.L.		International Decimal Coinage.
George Rolleston, M.D., F.R.S., Professor of Anatomy and Physiology in the University of Oxford		The Modes of Sepulture employed by the Romans, Romanized Britons, and Anglo-Saxons, from the Fourth to the Seventh Century, in England.
Do. . . . .	.. ..	Do.

*Lecturer.**Subject.*

JUVENILE LECTURES.

W. Sykes Ward	..	..	..	On Lead in Relation to its Geology, Mineralogy and Industrial Application.
Henry Denny	..	..	..	The Transformations of Insects.
Dr. Jessop	..	..	..	The Physiology of Digestion, the Food we eat and the use we make of it.

PUBLIC LECTURES.

Louis Compton Miall	A Course of Twelve Lectures on Geology.
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1870-71.

W. H. Dixon	The Great West; the Feeding Ground of the Anglo-Saxon Race.
Professor Seeley, Professor of Modern History in the University of Cambridge				Schiller.
Wm. Carruthers, British Museum				The Vegetation of the Coal Period, and its relation to the plants of the present day.
R. A. Procter, B.A.	..	..	..	Saturn and its System, and the Lands and Seas of Mars.
Do.	..	..	..	Stars and Star Systems.
Professor J. R. Seeley	..	..	..	Goethe.
Rev. H. B. Tristram, LL.D., F.R.S.				The Story of Past Geological Ages, as told by the Living Forms of Palestine.
Professor T. H. Huxley, LL.D., F.R.S., President of the British Association				Yeast.
W. F. Barrett, Professor of Natural Philosophy at the International College, London				Faraday's Electrical Discoveries.
Anthony Trollope	..	..	..	Prose Fiction as a Rational Amusement.
Professor Rev. Sir Frederick Gore Ouseley, Bart., Mus.D. Oxford				History of Music.
Do.	..	..	..	Music, a Science as well as an Art.
Rev. Charles Wicksteed, M.A.	..	..	..	Recollections of Continental Travel a Generation ago.
Edward Burnett Tylor, V.P. of the Ethnological Society of London				Primitive Civilisation.
William Sykes Ward	..	..	..	Acoustics and Musical Instruments.
Dr. John Birkbeck Nevins, Pres. of the Liverpool Philosophical Society				The Changes observed in Plants during the Ripening of Seeds.
James Glaisher, F.R.S.	..	..	..	Rain, how derived, various forms under which it appears, how measured, its different amount in different places, monthly and annually, its importance in supplying towns with water.
Louis Compton Miall	..	..	..	Early History of Domestic Animals.

PUBLIC LECTURES.

Louis Compton Miall	A Course of Thirteen Lectures on Botany.
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*Lecturer.**Subject.*

1871-72.

Dr. J. D. Heaton	The Present State of the Question of Spontaneous Generation.
Rev. Dr. C. D. Ginsburg	The Moabite Stone.
Professor Leone Levi, Doctor of Political Economy.	Economic Studies on London.
Professor Osborne Reynolds, Fellow of Queen's College, Cambridge	The Physical Constitution of Comets.
E. A. Freeman	The Growth of the English Constitution from the earliest times.
W. Pengelly, F.R.S.	Recent Speculations respecting the Climatal History of the Earth.
W. B. Carpenter, M.D., V.P.R.S., President-elect of the British Association	The Physical Conditions and Animal Life of the Deep Sea.
Nathaniel J. Holmes	Electricity and War.
Jon A. Hjaltalin	The Physical Features of Iceland, the Manners and Customs of the Icelanders.
Rev. G. Henslow, Lecturer on Botany at St. Bartholomew's Hospital, London	Geographical Botany, with special reference to the origin and distribution of the British Flora.
Dr. William Turner, Professor of Anatomy in the University of Edinburgh	Great Whales.
Louis Compton Miall	The Geology of Leeds and the Neighbourhood.

PUBLIC LECTURES.

Louis Compton Miall	A Course of Ten Lectures on The Distribution of Plants and Animals.
Edward Atkinson	A Course of Eight Lectures on Zoology, dealing more particularly with the Mammalia.

1872-73.

Rev. Canon Woodford, D.D., the President	Literary Life at the beginning of the Eighteenth Century.
Archibald Geikie, LL.D., F.R.S., Professor of Geology in the University of Edinburgh	Hill and Valley Sculpture.
Balfour Stewart, LL.D., F.R.S., Professor of Natural Philosophy at Owens College, Manchester	The Meteorology of the Sun in connection with that of the Earth.
Do.	Radiant Light and Heat.
J. R. Seeley, Professor of Modern History in the University of Cambridge	The Two Pitts.
Dr. J. Crichton Browne	Mental Dietetics.
Dr. Michael Foster, F.R.S., Professor of Physiology in the University of Cambridge	The Sense of Hearing.
The Very Rev. A. P. Stanley, D.D., Dean of Westminster	The Christian Catacombs of Rome.
E. B. Tylor, F.R.S.	The Primitive Social Condition of Man.
Rev. John Gott	The History of Printing.
Rev. M. W. Mayow	Shakespeare—an attempt to place in order of merit the four greatest plays.

*Lecturer.**Subject.*

Rev. Canon Tristram, LL.D., F.R.S.	..	The Exploration of Moab.
W. F. Barrett .. ..	..	Some new Phenomena associated with Magnetism.
George Redford, F.R.C.S.	..	Art, in its relations to Civilisation, Wealth, National Progress and Morality.

PUBLIC LECTURES.

Dr. J. E. Eddison	A Course of Eight Lectures on Animal Physiology.
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JUVENILE LECTURES.

Louis Compton Miall	Two Lectures on "The Noah's Ark" being a description of the toy so named, and "The Humming Top."
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LECTURES READ AT ANNUAL CONVERSAZIONE.

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1873-74.

J. I. Ikin, Vice-President	..	Epochs in the progress of Physiological Science.
J. Norman Lockyer, F.R.S.	..	Recent Researches in Spectrum Analysis.
John Morley .. ..	..	Robespierre.
Edward J. Poynter, A.R.A.	..	The Study of Figure Painting.
Walter Baily .. ..	..	The Chemistry of the Alcohols.
T. Wemyss Reid .. ..	..	W. M. Thackeray, and the Influence of his Writings.
J. Gwyn Jeffreys, F.R.S. ..	..	The Mollusca of the European Seas.
T. McKenny Hughes, Woodwardian Professor of Geology, Cambridge	..	River Denudation and Lake Basins.
J. R. Seeley, Professor of Modern History, Cambridge	..	The Regeneration of Germany and the Baron von Stein.
Arminius Vambery, Professor of Oriental Languages, Pesth	..	Khiva and the Recent Russian Campaign.
Dr. David Ferrier, Professor of Forensic Medicine, King's College, London	..	The Localisation of the Functions of the Brain.
J. W. Halles .. ..	..	King Lear.

1874-75.

Very Rev. W. C. Lake, D.D., Dean of Durham	..	The Comparative advantages and the present position of Literary and Scientific Studies.
Dr. P. Martin Duncan, F.R.S., Professor of Geology, King's College, London	..	Palaeozoic and Neozoic Corals.
Dr. W. Huggins, F.R.S. .. ..	..	The Approaching Transit of Venus.
J. T. Wood .. ..	..	The Discovery of the Temple of Diana, and the other results of Excavations at Ephesus.
R. H. Scott, F.R.S., Director of the Meteorological Office	..	The Present Condition of Storm Warnings in the United Kingdom.
T. W. Rhys Davids, late of the Ceylon Civil Service	..	Gautama Buddha; his Life and Teachings.

<i>Lecturer.</i>	<i>Subject.</i>
Professor A. H. Green, M.A.	Recent Developments of the Theory of Volcanic Phenomena.
Walter Bailey	The Passage of Light through Optical Instruments.
J. C. Morison	Joan of Arc.
Professor T. E. Thorpe, Ph.D., F.R.S.E.	The Measurement of the Chemical Action of Sunlight.
Rev. J. Estlin Carpenter	Art and Literature in Egypt in the Fourteenth Century, B.C.
Professor A. W. Rücker, M.A.	Soap Bubbles.
E. C. Clark, LL.M., Regius Professor of Civil Law, Cambridge	The Christian Antiquities of Ravenna.
Professor W. C. Williamson, F.R.S.	Coal and Coal Plants.

PUBLIC LECTURES.

Louis Compton Miall	A Course of Six Lectures on the Geology of the Neighbourhood of Leeds and Two Lectures on the Structure and Mode of Life of the Elephant.
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LECTURES DELIVERED AT ANNUAL CONVERSAZIONE.

Dr. T. Clifford Allbutt, M.A.	The History and Methods of Wood Engraving.
Professor A. W. Rücker, M.A., of the Yorkshire College of Science	Experiments on Attraction and Repulsion by Radiation.

1875-76.

The Most Hon. the Marquis of Ripon, K.G.	The Opening Address.
Professor St. George Mivart, F.R.S.	Apes.
W. H. Stone, M.D.	The Theory of Musical Instruments.
Do.	Do.
C. O. Shepard, late U.S. Consul at Yokohama	Japan and the Japanese.
Professor Henry Morley	Spenser's Faerie Queene.
Clements R. Markham, C.B., F.R.S.	The Voyage of the Valorous, and the Objects of the Arctic Expedition.
Professor A. W. Ward, Owens College, Manchester.	Politian and Hutten; two Renaissance Sketches.
Do.	Do.
Rev. Thomas Fowler, Professor of Logic in the University of Oxford	Francis Bacon as a Scientific Reformer.
Edward Armitage, R.A.	The Composition of Historical Pictures and on Figure Subjects in general.
Sydney Lupton, M.A.	Colours from Coal Tar.
F. J. Bramwell, F.R.S.	Railway Safety Appliances.
Rev. Canon Tristram, LL.D., F.R.S.	The Birds of the South Pacific.
W. Chandler Roberts, F.R.S., Chemist to the Royal Mint	Coinage in Ancient and Modern Times.

LECTURE DELIVERED AT ANNUAL CONVERSAZIONE.

Professor F. W. Rudler, of the University College of Wales	The History of the Potter's Art in Britain.
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*Lecturer.**Subject.*

1876-77.

Rev. J. H. McCheane, M.A., President.	A Curious Defect in Modern Education.
Edward Rae	Siberia in Europe, being Impressions of the Samoyedes.
W. H. Flower, F.R.S., Hunterian Professor of Comparative Anatomy, Royal College of Surgeons	The Extinct Animals of North America.
R. S. Ball, LL.D., F.R.S., Professor of Astronomy, University of Dublin	The Laws of Motion, with Experimental Illustrations.
Dr. P. M. Duncan, F.R.S., Professor of Geology, King's College, London; President of the Geo- logical Society	The Later Geological Periods in Europe, India, South Africa and Australia.
J. G. Fitch	The Future Work of the English Univer- sities.
Commander Cameron, R.N., C.B.	Travels in Africa.
Capt. A. H. Markham, R.N., C.B.	A Personal Narrative of the Recent Arctic Expedition.
T. Pridgin Teale, M.A.	Dangers to Health in our own Houses.
T. McK. Hughes, Woodwardian Professor of Geology, Cambridge	The Life and Work of Professor Sedgwick.
Sidney Colvin, Slade Professor of Fine Art, Cambridge	Olympia and Greek Athletics; an Account of Ancient Usages and Recent Discoveries.
J. C. Morison	The Paston Letters.
J. R. Mozley, M.A.	The Life and Poetry of Shelley.
James Fowler	Illustrations of the Months and Seasons in Art, with Tracings, Drawings, etc.
Henry Bowers, late Government Inspector of Schools in Madras	The Moral Teaching of an Early Hindu Reformer.
Rev. Samuel Haughton, M.D., F.R.S., Professor of Geology, University of Dublin	Illustrations of the Laws that regulate Muscular Work and Fatigue.

JUVENILE LECTURES.

Professor Barrett, F.R.S.E., Pro- fessor of Physics, Royal College of Science, Dublin	Electricity, with Experiments.
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LECTURES DELIVERED AT ANNUAL CONVERSAZIONE.

Professor A. W. Rücker, M.A. ..	The Constitution of Matter. (The evidence of the Radiometer).
Professor T. E. Thorpe, Ph.D., F.R.S.	The Constitution of Matter. (The evidence of the Spectroscope).

1877-78.

His Grace the Archbishop of York	The Worth of Life.
W. R. S. Ralston	Popular Russian Literature.
G. J. Romanes	Beginning of Nerves and Nervo Systems.
Professor Goldwin Smith	The Political Geography of England.
W. F. Barrett, F.R.S.E., Professor of Physics in the Royal College of Science, Dublin	The Telephone, with numerous Experi- ments.
Rev. Dr. Abbott, Head Master of City of London Schools	From Four to Eighteen—an Educational Course.

<i>Lecturer.</i>	<i>Subject.</i>
Osborne Reynolds, F.R.S., Professor of Engineering, the Owens College	Vortex Motion, with Experimental Illustrations.
William Crookes, F.R.S.	The Radiometer.
Rev. C. H. Middleton	Rembrandt as an Etcher.
John Marshall, M.A., Professor of Ancient Literature and History in the Yorkshire College	The Dead Languages. What they are, and what they are good for.
Dr. J. H. Bridges	The Position of Sociology among the Sciences.
Rev. W. Knight, Professor of Moral Philosophy, University of St. Andrews	The Scottish Universities.
G. F. Armstrong, M.A., Professor of Engineering in the Yorkshire College	The Study of Architecture. Its value in a System of Education.
Rev. C. Hargrove, M.A.	Caedmon, the first great Poet of England.
Rev. J. H. McCheane, M.A., President	Tennyson's "In Memoriam."

1878-79.

Dr. T. Clifford Allbutt, M.D., President	The Productive Career of Great Men.
H. B. Brady, F.R.S.	Morocco and the Moors (Fez-Mekinez-Rabat).
Louis Compton Miall, Professor of Biology in the Yorkshire College	The Range of Animals as Affected by Past Events.
T. Wemyss Reid	Emily Bronte, and the Authorship of "Wuthering Heights."
The Right Hon. Lord Houghton, D.C.L., F.R.S.	The Place of Imagination among the Mental Faculties.
T. E. Thorp, Ph.D., F.R.S., Professor of Chemistry in the Yorkshire College	The Solar Eclipse of 1878.
Dr. J. Crichton Browne	Right-handedness.
R. A. Proctor, B.A.	The Birth and Death of Worlds.
James Macdonell	The Court and the Political Society of Paris in 1830.
Rev. W. H. Dallinger	Recent Researches into the Origin and Development of the Least and Lowliest Life-Forms.
R. A. M. Bosanquet	On Just Intonation in Music (with Illustrations on the Enharmonic Harmonium).
Dr. G. Rolleston, F.R.S., Professor of Anatomy and Physiology, Oxford.	Domestication of Animals.
Professor G. Forbes, F.R.S.E. ..	With the Russians in Asia. Campaign of 1877.

JUVENILE LECTURES.

Miss L. M. Passavant	Six Object Lessons in Natural History on the following subjects:—Cats, The Structure of a Flower, The Organisation of a Bird, Flightless Birds, Wheat, Corals, and Coral Polyps.
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*Lecturer.**Subject.*

1879-80.

Professor A. Milnes Marshall, D.Sc.	The Modern Study of Zoology.
J. I. Coates	The Picts' Wall.
Professor W. H. Flower, LL.D., F.R.S.	The Tasmanian Aborigines; a History of an Extinct Race.
H. H. Statham	The Philosophy of Architectural Design.
John Ralph, M.A.	Pindar and Greek Lyric Poetry.
Professor W. Boyd Dawkins	Our Earliest British Ancestors.
Oscar Browning	Cavour and the Regeneration of Italy.
Rev. Canon Tristram, LL.D., F.R.S.	Fish and Fisheries.
Lieut. G. T. Temple, R.N.	Norway and Lapland.
R. W. Macan	German Epic Poetry. The Nibelungen- lied.
Very Rev. B. M. Cowie, B.D., Dean of Manchester	Modes of Motion.
Professor Cyril Ransome, M.A.	The Battle of Marston Moor.

1880-81.

Professor Silvanus P. Thompson, D.Sc.	Waves of Sound and the Photophone.
Rev. S. Farrington	John Ruskin.
H. C. Sorby, LL.D., F.R.S.	The Structure and Origin of Meteorites and Meteoric Iron.
Dr. Sydney H. Vines	The Nutrition of Plants.
Professor E. Ray Lankester, F.R.S.	Degeneration.
Professor Henry Morley	The Present Tendencies of English Literature.
A. H. D. Acland	The Last of the Romans.
Bret Harte	The Argonauts of '49.
Professor T. E. Thorpe, Ph.D., F.R.S.	The Azores.
J. W. Swan	Electric Lighting, with Demonstrations.
A. P. Graves	Irish Bardic Literature.

1881-82.

Rev. John Gott, D.D., President	The Art of Engraving.
Professor P. Martin Duncan, F.R.S.	Lakes and their Natural History.
Professor R. S. Ball, LL.D., F.R.S.	The Great Comet of 1881.
Henry Blackburn, Editor of <i>Academy Notes</i>	The Art of Popular Illustration.
Professor Sidney Colvin	Raphael and Rembrandt, a Comparison.
Sir Richard Temple, G.C.S.I.	The Value of India to England.
T. Wemyss Reid	George Eliot—Author and Woman.
W. Galloway	Colliery Explosions.
Professor W. E. Ayrton, F.R.S.	Electric Railways.
Rev. M. Creighton	A Scholar's Life in the Fifteenth Century.
Professor H. E. Roscoe, LL.D., F.R.S.	Indigo and its Artificial Preparation.
Professor A. W. Rücker, M.A.	The Early History of the Earth.

1882-83.

The Rt. Hon. Sir H. Bartle E. Frere, Bart., G.C.S.I., G.C.B., F.R.S.	Literature and Philosophy in South Africa
. Wemyss Reid	Mrs. Carlyle.

<i>Lecturer.</i>	<i>Subject.</i>
T. P. Teale, M.A.	The Economical Combustion of Coal.
E. B. Tylor, D.C.L., F.R.S. ..	Original and Borrowed Civilisation.
Professor Arthur Schuster, Ph.D., F.R.S.	The Egyptian Eclipse.
Rev. Canon Tristram, D.D., F.R.S.	Wanderings near the Euphrates.
Professor Louis Compton Miall ..	The Life and Work of Charles Darwin.
Sir F. J. Bramwell, F.R.S. ..	The Channel Tunnel.
R. H. Hutton	The Poetry of Arthur Hugh Clough. A Discussion on Thought Reading.
Henry Seebohm	Siberia.
W. Creser, Mus.D.	The Life and Dramatic Compositions of Henry Purcell.

1883-84.

Principal J. W. Dawson, C.M.G., LL.D., F.R.S., Vice-Chancellor of McGill University, Montreal	Silurian and Devonian Plants.
Professor R. S. Ball, LL.D., F.R.S., Royal Astronomer of Ireland	Recent Researches on the Distance of the Earth from the Sun.
Dr. J. E. Eddison, President ..	The Conditions of Life in our Large Towns.
Sir John Lubbock, Bart., M.P., D.C.L., LL.D., F.R.S.	Ants.
Professor Bonamy Price	What is Education ?
Professor H. N. Moseley, F.R.S. ..	Life on the Surface of the Ocean.
Professor N. Bodington, M.A. ..	Two Centuries of University Life.
Lewis Morris	Poetry and Criticism.
Professor A. H. Green, M.A. ..	A Visit to Cape Colony.
Rev. C. Hargrove	The Founders of Fountains Abbey.
Henry Blackburn, Editor of <i>Academy Notes</i> .	Pictures of the Year.
William Morris	Art and Labour.

1884-85.

Ven. Archdeacon Farrar, D.D., F.R.S., Canon of Westminster	Some of the Rabbis of Israel.
Matthew Arnold	Literature and Science.
Andrew Lang	Fairy Tales and their Origin.
Professor J. S. Blackie	Beauty in Nature and Art.
Donald MacAlister, M.D. ..	Germ.
P. Herbert Carpenter, D.Sc.	Star Fishes and Sea Urchins.
Charles G. Milnes Gaskell ..	Arthur Hallam and his Contemporaries.
Thomas Marshall, M.A. ..	Herodotus.
H. Clifton Sorby, LL.D., F.R.S.	The Character of Water as Indicated by the Number of Minute Organisms.
Professor I. Bayley Balfour, D.Sc., F.R.S.	The Island of Socotra.
Professor J. P. Mahaffy	Novels and Novel Writers among the Old Greeks.
T. Wemyss Reid	Grub Street.

PAPERS READ AT ANNUAL CONVERSAZIONE.

Henry Blackburn, Editor of <i>Academy Notes</i>	An Account of some of the most note- worthy among recent Pictures.
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<i>Lecturer.</i>	<i>Subject.</i>
1885-86.	
The Most Hon. the Marquis of Ripon, K.G.	The Native States of India.
Rev. Canon H. B. Tristram, D.D., F.R.S.	The Hittite Empire; the Story of a Long-Forgotten Nation.
Professor T. G. Bonney, D.Sc., F.R.S., President Geological Society	New Red Sandstone; an Episode in the Building of England.
H. H. Johnston	Mount Kilimanjaro, the Snow-clad Mountain of Eastern Equatorial Africa.
Wm. Simpson, Hon. Assoc., R.I.B.A.	Illustrated Journalism and the Work of a Special Artist.
Edward Atkinson, President ..	Self-help in Plant Life.
Right Rev. the Lord Bishop of Ripon, D.D.	Dante.
W. E. Clarke	The Migration of Birds.
Sir J. Crichton Browne, M.D. ..	The Education of the Hand.
Professor Oliver Lodge, D.Sc. ..	Modern Views of Electricity.
C. V. Boys	Mechanical Aids to Calculation.
Louis Fagan.. ..	The Art of Engraving, from its origin to the commencement of the Sixteenth Century.
Dr. C. M. Chadwick	M. Pasteur and his Work.

PUBLIC SATURDAY AFTERNOON MUSEUM LECTURES.

Professor L. C. Miall	Extinct Wild Beasts of Yorkshire.
Rev. C. Hargrove, M.A.	Mummies.
S. Lupton, M.A.	Joseph Priestley.
W. E. Clarke	The Migration of Birds.
Professor L. C. Miall	Weeds.
F. W. Branson	The Microscope.
J. W. Connon	Kirkstall Abbey.

1886-87.

Thomas Marshall, M.A., President	The Art of Government.
Henry Wallis	Persian and Arabian Ceramic Art.
Edmund Gosse, Clark Lecturer at Trinity College, Cambridge	Hans Christian Andersen.
Arthur Smithells, B.Sc., Professor of Chemistry, Yorkshire College	The Modern History of the Chemical Elements.
A. V. Dicey, Vinerian Professor of English Law, University of Oxford	Lawlessness.
G. W. Balfour, M.P.	Colour.
Rev. Canon MacColl., F.R.S. ..	Socrates, as a Teacher and Humorist.
A. W. Rücker, M.A., F.R.S., Professor of Physics, Normal School of Science and Royal School of Mines	The Three States of Matter.
J. E. Harting	Dogs, Ancient and Modern.
J. Annan Bryce	Burma.
Rev. A. Jessopp, D.D.	Some Religious Houses in the Neighbourhood of Leeds.

PUBLIC SATURDAY AFTERNOON MUSEUM LECTURES.

S. Lupton, M.A.	Glass.
Professor L. C. Miall	The Animal Life of the Leeds River.

<i>Lecturer.</i>	<i>Subject.</i>
Professor A. H. Green, M.A.	.. Fossil Trees.
C. H. Bothamley .. ..	.. The Alchemists.
Rev. C. Hargrove, M.A. ..	.. Idols.
H. D. Berridge .. ..	.. Sound.
W. E. Clarke .. ..	.. The Wild Quadrupeds of Yorkshire.

1887-88.

Sir J. D. Linton, President of the Royal Institute of Painters in Water Colours	The National Art.
Geo. Augustus Sala .. ..	.. What I saw in Australia.
Frederic W. H. Myers .. ..	.. Aims and Methods of Psychical Research.
Capt. C. R. Conder, R.E. ..	.. Canaanite Races.
Rev. F. J. Jayne, M.A. ..	.. The Principle of "State Interference."
Francis Darwin, F.R.S. ..	.. Some Hardships in the Life of Plants.
Capt. W. de W. Abney, R.E., F.R.S.	The Measurement of Colour.
Discussion Evening .. ..	.. The Artificial Formation of Organic Substances.

Introduced by three short papers, viz. :—

Sydney Lupton, M.A. .. ..	.. General Considerations.
Professor J. J. Hummel .. ..	.. Technical Applications.
Professor A. Smithells, B.Sc. ..	.. Future Possibilities.
Sir George Morrison .. ..	.. Charles Lamb.
Professor H. B. Dixon, F.R.S. ..	.. The Nature of Flame.
Ernest Hart, Editor of the <i>British Medical Journal</i>	Masterpieces of Japanese Art.
Rev. W. H. Dallinger, D.D., F.R.S.	Contrasts in Nature ; the infinitely great and the infinitely little.

Conference on "Home Arts as a Branch of Technical Education," at which papers were read by :—

Alfred Harris .. ..	.. Technical Night Schools in Germany.
Mrs. Ernest Hart .. ..	.. Village Technical Teaching in Donegal.

PUBLIC SATURDAY AFTERNOON MUSEUM LECTURES.

Sydney Lupton, M.A. .. ..	.. Indigo.
Professor C. Ransome, M.A. ..	.. The Battle of Leeds.
W. E. Clarke .. ..	.. Duck Decoys.
Alfred Denny .. ..	.. Spiders and their Ways.
H. L. Roth .. ..	.. Some West Indian Savages.
Professor L. C. Miall .. ..	.. A Stick of Red Sealing Wax.
G. H. L. Rickards .. ..	.. Bees.
Dr. J. E. Eddison .. ..	.. Savage Art.

1888-89.

Professor Herkomer .. ..	.. Art.
Professor Flower, C.B., LL.D., F.R.S.	The Pygmy Races of Men.
Edward E. Prince .. ..	.. The Early Life-History of British Food Fishes.
Admiral P. H. Colomb .. ..	.. National Defence.
Professor Ernest Pauer .. ..	.. The Characters of the Great Composers and the Characteristics of their Work.

<i>Lecturer.</i>	<i>Subject.</i>
Augustine Birrell	The Life and Times of Samuel Richardson.
Sir Robert Ball, LL.D., D.C.L., F.R.S.	The Recent Discovery of Invisible Stars.
Thomas Marshall, M.A., President	The Theory of Taste.
Rev. Canon Tristram, D.D., F.R.S.	The Canary Islands.
Rev. E. R. Conder, D.D. ..	The Place of Imagination in Education.
Professor N. Bodington, M.A. ..	Matthew Arnold.
Professor F. Max Muller ..	The Sacred Books of the East.
Discussion Evening ..	Examinations as a Test of Knowledge.
Introduced by	
Professor N. Bodington, M.A., and	
T. Pridgin Teale, M.A., F.R.S.	
H. O. Arnold-Forster	The Effect of Parliamentary Control over our War Services.

PUBLIC SATURDAY AFTERNOON MUSEUM LECTURES.

Professor L. C. Miall	The Structure of the Honey-Bee.
Sydney Lupton, M.A.	Crystals.
Edgar R. Waite	Woodpeckers.
Professor L. C. Miall	The Iguanodon, a great extinct reptile.
Professor J. J. Hummel	Ancient and Modern Scarlet Dyes.
Bishop Scott, D.D.	China.

1889-90.

The Rt. Hon. the Earl of Carnarvon, Liberty of Speech. D.C.L.	
The Rt. Hon. Lord Houghton, Thomas Wentworth, Earl of Strafford. D.C.L.	
C. V. Boys, F.R.S.	Quartz Fibres.
Henry Blackburn	Algeria and Morocco.
Professor L. J. Rogers, M.A., Mus. Bac.	History of Dance Music.
E. B. Poulton, F.R.S.	The Use of Colour in the Animal Kingdom especially illustrated in the case of Insects.
Professor Archibald Barr	Some Scientific Questions concerning Pictures.
Dr. Tempest Anderson	The Sicilian Volcanoes.
Arthur Sidgwick	Browning.
Professor Marshall Ward, F.R.S.	Timber, and some of its diseases.
J. Churton Collins	The Proper Functions of Poetry.
H. Morse Stephens	The Story of the Bastille and its Capture.
Discussion Evening	The best method of teaching a Modern Language.

Introduced by
Rev. J. H. D. Matthews and Monsieur P. H. M. du Gillon.

PUBLIC SATURDAY AFTERNOON MUSEUM LECTURES.

Edgar R. Waite	The Life of Mammals.
Harold Wager	Green Leaves.
Professor L. C. Miall	Contrivance in Nature.
Rev. Charles Hargrove, M.A.	Flints and Flint Tools.
Edmund Wilson	Old Leeds.

<i>Lecturer.</i>		<i>Subject.</i>
1890-91.		
Sir Henry Doulton	..	.. Some Modern Developments of English Pottery, illustrated by a valuable collection of artistic pottery, and by practical demonstrations of the artist's skill with the Potter's Wheel.
C. H. H. Parry, Mus. Doc.	..	.. The effect produced by the Musical Revolution of 1600 upon Choral Music, with vocal illustrations by a select choir, kindly prepared for the occasion by Mr. Alfred Broughton of Leeds.
Prof. W. Stroud, D.Sc.	..	.. Range Finders, Past and Present.
W. Douglas Freshfield	..	.. The Caucasus, with lantern illustrations.
Allan Wyon	..	.. The Great Seals of England and their History.
Professor James Bryce, D.C.L., M.P.		Iceland.
Professor G. Baldwin Brown, M.A.		The Mediaeval Monastery as the Home of Art and Culture, with lantern illustrations.
Lord Bishop of Ripon	..	.. Leaves from the Book of the Great Decease; the last days of Gotama.
Bishop Barry, D.D.	..	.. Law and Liberty; a Present Day Problem.
T. Pridgin Teale, M.A., F.R.S., President		Dust and Fresh Air; how to keep out the one and let in the other.
A. A. Common, F.R.S.	..	.. Recent Astronomical Work, with lantern illustrations and exhibitions of astronomical instruments.
Professor T. E. Thorpe, Ph.D., F.R.S.		Some Recent Contributions to Terrestrial Magnetism.

SATURDAY AFTERNOON LECTURE.

Rev. Canon Hicks The Greek Inscriptions in the Museum.
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1891-92.

Professor L. C. Miall Some difficulties in the Life of Aquatic Insects.
Sir Robert S. Ball, LL.D., F.R.S.		An Astronomer's Thoughts about Krakatoa.
Colonel J. F. Maurice, R.A., Professor of Military History at the Staff College		The Strength and Weakness of England as a Great Power.
W. Hancock, of the Chinese Imperial Customs Service		Formosa, its geology, flora, fauna, and aborigines.
Rev. P. H. Wicksteed, M.A.	..	The Troubadours.
Dr. T. Clifford Allbutt, M.A., F.R.S.		The Travels of Early Peoples; Trade and War Routes.
Edmund Gosse	..	.. Henrik Ibsen.
Professor P. F. Frankland, Ph.D., F.R.S.		Recent Contributions to our knowledge of the Production and Consumption of Alcohol.
J. Theodore Bent	..	.. Exploration among the Ruined Cities of Mashonaland.
Professor R. Meldola, F.R.S.	..	The Evolution of Modern Photography.
Albert W. Schüddekopf, Ph.D.	..	The History of the Faust Legend.

*Lecturer.**Subject.*

1892-93.

George du Maurier	Social Pictorial Satire.
C. V. Boys, F.R.S.	Photographs of Flying Bullets.
W. Warde Fowler, M.A.	The Songs of Birds.
D. Morris, Assistant Director of the Royal Gardens, Kew	Phases of Plant Life in the Tropics.
Charles Waldstein, Ph.D.	Recent Excavations in Greece.
C. Milnes Gaskell	Richard Monckton Milnes, Lord Houghton.
Alfred Austin	Poetry and Pessimism.
Rev. J. H. D. Matthews, M.A., President	Style.
E. B. Poulton, F.R.S.	Methods by which Animals conceal themselves.
Rev. C. G. Lang, Fellow of All Souls' College, Oxford	Walt Whitman.
Professor A. Milnes Marshall, D.Sc., F.R.S.	Animal Pedigrees.

SATURDAY MORNING LESSONS TO CHILDREN.

Miss Mary Simpson	Six Lectures on Natural History.
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1893-94.

W. H. St. John Hope	Kirkstall Abbey; its plan and arrangements, and the means being taken to preserve it.
Mrs. Bishop	A Journey through Western Tibet.
Professor Oliver Lodge, D.Sc., F.R.S.	The Interstellar Ether.
Rev. Canon Ainger, LL.D.	Jonathan Swift.
Professor A. Smithells, B.Sc.	Flame.
W. H. Hadow, M.A.	The Appreciation of Music.
Major G. F. R. Henderson	The Armies of to-day.
Archibald R. Colquhoun	Matabeleland, and our position in South Africa.
Professor J. A. Fleming, D.Sc., F.R.S.	The Scientific Work of Galileo.
Professor T. E. Thorpe, Ph.D., F.R.S.	The Recent Solar Eclipse.
W. M. Conway	Climbing and Travel among the great mountains of Asia.
Dr. J. E. Eddison	Genius and Sanity.
Colonel T. W. Harding	General Buonaparte.
Arthur Sidgwick	Mrs. Browning.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	Three Lectures on :— Jelly-fishes and Corals. Shells and their Inmates. Feathers and Wings.
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OBJECT LESSONS TO CHILDREN.

Miss Mary Simpson	Six Lectures on Elementary Natural History.
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*Lecturer.**Subject.*

1894-95.

Professor Charles Stewart	..	Co-operation in Nature.
Henry O. Forbes, LL.D. ..	..	Experiences among the Smooth and Frizzly-haired Islanders of the Eastern Archipelago.
Sir T. Wemyss Reid, LL.D.	..	The Art of Biography.
A. W. Verrall, Litt.D. ..	..	Henry Fielding.
C. Carus-Wilson .. ..	..	Musical Sands.
Mrs. J. R. Green .. ..	..	Country Life in the Middle Ages.
Professor Karl Pearson, LL.B.	..	The Chances of Death.
D. S. MacColl, M.A. ..	..	Impressionism; or the Logic of Modern Painting.
Professor John Goodman ..	..	Constructive Art in Early Egypt, as exemplified in the Pyramids.
Professor W. A. Herdman, D.Sc., F.R.S.		Protective Artifices among Marine Animals.
Professor A. Smithells, B.Sc.	..	The Recent Discovery concerning the Composition of the Air.
Edmund Wilson .. ..	..	Slums.
F. B. Jevons, M.A. .. ..	..	Women of Ancient Greece.
Oliver Elton, B.A. .. ..	..	Leopardi; a Modern Classic.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther .. ..	..	Monkeys.
		Birds which cannot Fly.
		Injurious Insects.
		Minerals.

SUMMER LECTURES TO CHILDREN.

Miss Mary Simpson	Six Lectures on Natural History.
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1895-96.

Rev. W. T. A. Barber	The Making of a Chinaman.
Professor W. M. Flinders Petrie, D.C.L., LL.D.		A New Race in Egypt.
Thomas Marshall, M.A. .. ..	..	The Homeric Woman.
Capt. F. D. Lugard, C.B., D.S.O.		British Expansion in Africa.
Professor E. C. Clark, LL.D. ..	..	Present University Education.
Professor William Ramsay, Ph.D., F.R.S.		The New Gases.
I. Zangwill, B.A. .. ..	..	The Ghetto.
P. H. M. du Gillon .. ..	..	Molière, and his Bourgeois Gentilhomme.
Professor Edward B. Poulton, F.R.S.		Warning and Signalling amongst Animals.
James Orrock .. ..	..	John Constable, illustrated by pictures by the Master.
Julius B. Cohen, Ph.D. .. ..	..	The Character and Extent of Air Pollution in Leeds.
H. Clifton Sorby, LL.D., F.R.S.		History of Mythological Animals in Norman Sculptures.
Rev. Professor J. P. Mahaffy, D.D.		Mount Athos and the Monks.
Rev. C. Hargrove, M.A. .. ..	..	A Mappa Mundi of the 13th Century (with facsimile and lantern illustrations).

Special Meeting under joint auspices of the Society and of the Chamber of Commerce. Lecture by A. R. Colquhoun .. The Nicaragua Canal.

*Lecturer.**Subject.*

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	Aquatic Beasts. Birds' Nests and Eggs. How Fossils tell the Earth's History.
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AFTERNOON LECTURES.

Edward Atkinson	Six Lectures on The Palestine Map presented to the Society by Mr. W. H. Rinder.
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1896-97.

Rt. Hon. the Earl of Crewe	Parliamentary Eloquence in England.
Frederic Harrison	The Rise of the Dutch Republic.
B. Minssen	..	..	..	Les Memoires du Baron de Marbot.
Lady Evans	..	..	..	Death and the Under-world, as illustrated in Greek Art.
Percy F. Kendall	..	..	..	The Ice Age in Yorkshire.
W. H. Hadow	..	..	..	Melody.
Rev. Canon Tristram, D.D., LL.D., F.R.S.				Japan.
Principal Bodington, Litt.D.	..	..	..	The Story of Lanuvium, with reference to the Savile Collection of Antiquities.
Edmund Gosse	..	..	..	Personal Impressions of Robert Louis Stevenson.
Edmund Wilson, President Professor Oliver J. Lodge, D.Sc., F.R.S.				Jersey. The Nature and Properties of X-Rays.
John Rickards Mozley, M.A.	..	..	..	The Loss of Calais as one of the turning points of History.

1897-98.

Sir Walter Besant	..	..	..	Some Aspects of Mediaeval London.
Herbert W. Paul	..	..	..	Macaulay.
Miss Mary Kingsley	..	..	..	Travel in West Africa.
Theophilus G. Pinches	..	..	..	The Tower of Babel and the confusion of Tongues.
H. A. Miers, F.R.S.	..	..	..	Crystals and Precious Stones.
Carl Armbruster	..	..	..	Modern Composers of Classical Song (with Vocal Illustrations by Miss Pauline Cramer).
Owen Seaman, M.A.	..	..	..	Chautauqua, the Summer Lecture-City of the United States.
Sir W. Martin Conway	..	..	..	The First Crossing of Spitsbergen.
Shelford Bidwell, LL.B., F.R.S.	..	..	..	Some Curiosities of Vision.
C. T. Whitmell, M.A., B.Sc.	..	..	..	The Grand Canon of the Colorado of the West.
Arthur J. Grant, M.A.	..	..	..	Cardinal Richelieu.
E. Kitson Clark, M.A.	..	..	..	Gibraltar.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	Cats. Attack and Defence amongst Animals. Pots and Pottery.
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*Lecturer.**Subject.*

1898-99.

Principal Bodington, Litt.D., President	..	An Ancient House of Healing.
Rev. Canon Ainger, D.D.	..	The Historical Origin of Sir John Falstaff.
Professor A. W. Rücker, D.Sc., Sec. R.S.	..	Musical Concord and Discord.
Professor A. M. Worthington, F.R.S.	A Study of Splashes, by means of Instantaneous Photography.	
Arnold Dolmetsch .. ..	..	Old Musical Instruments, with Performances on a collection of Old Instruments
Professor C. Lloyd Morgan	..	Instinct and Intelligence in Animals.
C. G. Milnes Gaskell ..	..	Municipal Government Seventy Years ago.
Professor Patrick Geddes, F.R.S.E.	The Progress of Geography :— (a) The Great Globe. (b) The Outlook Tower.	
Professor W. A. Raleigh ..	..	Lord Chesterfield.
Professor Sydney J. Hickson, D.Sc., F.R.S.	..	Sea-water Animals of Celebes.
F. W. Moorman, Ph.D. ..	..	Ethical Problems of Shakespeare's Tragedies.
Charles W. Andrews ..	..	Christmas Island ; its Structure and Natural History.

1899-1900.

W. M. Flinders Petrie, D.C.L., LL.D., Ph.D.	Egypt, from Abraham to Athanasius.	
Walter Crane .. ..	..	The Language of Line.
Karl Pearson, F.R.S. ..	..	Some recent contributions to our Knowledge of Heredity.
Francis Gotch, F.R.S. ..	..	The Electrical Fish of the Nile.
Thomas Marshall, M.A. ..	..	Homeric Topography ; Troy, Mykenae, Delphi.
H. J. Palmer .. ..	..	Sydney Smith as a Yorkshire Country Parson.
H. E. Berthon .. ..	..	Balzac ; ses oeuvres et son influence.
A. Forbes Sieveking ..	..	The History of Gardens.
Oliver J. Lodge, D.Sc., LL.D., F.R.S.	..	Wireless Telegraphy.
Rev. Charles Hargrove, M.A. ..	..	The City of Rome ; its Rise, its Grandeur, and its Ruin.
Edmund Gosse, LL.D. ..	..	Robert Louis Stevenson.
I. Zangwill, B.A. .. ..	..	Fiction the highest form of Truth.
William Hancock .. ..	..	Travels in Guatemala, Salvador, and Nicaragua.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	Lanuvium, a Buried Roman City. The Clerk of the Weather. Some Marvels of Bird Life.
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1900-01.

Sir Andrew Noble, K.C.B., F.R.S.	Modern Explosives.
Sir William Lee-Warner, K.C.S.I.	Facts and Fancies about India.
Rev. W. T. A. Barber, M.A. ..	.. China and its Puzzle.
E. J. Garwood .. ..	.. Travels in the Eastern Himalaya.
W. G. Collingwood, M.A. ...	.. A Tour Abroad with Ruskin.

<i>Lecturer.</i>	<i>Subject.</i>
W. H. Hadow	The Emotional Element in Music.
H. F. Newall	Recent Discoveries in Astronomy.
Professor H. S. Hele-Shaw, LL.D., F.R.S.	The Flow of a Liquid.
Sir Wyke Bayliss	Shakespeare in Relation to his Contemporaries in Art.
Professor Arthur Smithells, B.Sc.	Liquid Air.
Professor J. A. Ewing, F.R.S. ..	The Structure of Metals.
Harold Wager	The Borderland between Animals and Plants.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	The Natural History of a Country Lane. Some Uses of Shells by Savage Tribes. The Part that Lime Plays in Nature.
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1901-02.

The Lord Bishop of Chester	.. Bishop Berkeley.
Rev. Canon Ainger, LL.D.	.. Walter Scott.
Principal Bodington, Litt.D.	.. The Mycenaean Age in Crete. The Palace at Knossos.
Major Ronald Ross, F.R.S.	.. Malaria and Mosquitos.
Hans Gadow, Ph.D., F.R.S.	.. Circumstances in the Life of Amphibia and Reptiles.
Charles Stewart, LL.D., F.R.S.	.. Protection and Nourishment of Young Fish.
R. P. L. Booker .. ..	.. Roman Roads in Yorkshire.
J. Norman Collie, F.R.S. ..	.. Exploration amongst the Canadian Rocky Mountains.
J. R. Mozley, M.A. ..	.. The Poetry of Byron.
Francis Bond, M.A. ..	.. Cathedral Building in France in the Thirteenth Century.
J. E. Marr, F.R.S. ..	.. The Evolution of Mountain Scenery.
J. Hartley Wicksteed, President.	.. Chains, past, present, and possible.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	The Romance of a Museum. Primitive Man. Life on the Sea shore.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Thirty Lectures on The Contents of the Museum.
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1902-03.

Sir William Ramsay, K.C.B., LL.D., F.R.S.	The Aurora Borealis.
Vaughan Cornish, D.Sc. The Forms of Sand Hills and Snow Drifts.
Alfred East, A.R.A. ..	.. Literature and Landscape Painting.
John Milne, F.R.S. ..	.. Earthquakes and Volcanoes, illustrated by recent disasters in the West Indies.
Arthur Sidgwick, M.A. ..	.. Aristophanes and the Greek Choral Comedy.
E. Kitson Clark, M.A. ..	.. The Roman Wall from Newcastle to Carlisle.
Major A. St. H. Gibbons	.. Africa from South to North.

*Lecturer.**Subject.*

Dr. J. E. Eddison	What we owe to Pasteur.
Professor P. F. Kendall	Ancient Glacier-Lakes in Yorkshire.
Sir Robert Anderson, K.C.B., LL.D.	About Crime and Criminals.
Rev. Charles Hargrove, M.A. ..	Gulliver's Travels and its Author.
William Gowland, Vice-President of the Society of Antiquaries	Recent Discoveries at Stonehenge.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	Savage Life in New Guinea, being a description of the Bedford collection of ethnological objects recently pre- sented to the Museum. The Story of a Fossil Fern. Butterflies and Moths.
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SPECIAL WEDNESDAY EVENING LECTURES.

Henry Crowther	Plants of the Hedgerows and the Woods. The Beasts and Birds of the Country-side. Flying Insects and Crawling Snails.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Thirty Lectures on Marvels of Bird Life.
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1903-04.

Professor Arthur Smithells, B.Sc., President	Radium and its Problems.
Bertram C. A. Windle, M.D., Sc.D., F.R.S.	The Manufacture and Use of Stone Implements.
F. E. Weiss, D.Sc.	Plants and their Insect Visitors.
D. S. MacColl, M.A.	A Modern Sculptor; Auguste Rodin.
A. C. Bradley, M.A., LL.D., D.Litt.	Shakespeare's Theatre.
Karl Pearson, F.R.S.	A Yorkshire Yeoman Family, 1350-1800.
Herbert Thompson, M.A., LL.M.	Dramatic Music.
Ernest Gardner, M.A.	Sculpture from the Wreck of an Ancient Ship.
W. Eagle Clarke, F.R.S.E. ..	Bird Watching at the Eddystone. A study in Migration.
W. R. Phillips, LL.M., M.A. ..	Legal Documents from Early Assyria.
Herbert Jackson	Phosphorescence.
Emil Reich	Does History repeat itself? An exam- ination of the latest theories of History.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	The Ancestry of a Penny, illustrated by the Baron collection of coins, the pro- perty of the Society. How Wild Beasts devour their Food. British Snakes and other Reptiles.
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SPECIAL LECTURE TO TEACHERS.

Henry Crowther	Insect Life.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Forty-six Lectures on Wonders of Insect Life.
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*Lecturer.**Subject.*

1904-05.

H. Spenser Wilkinson, M.A.	..	Some Aspects of National Defence.
Professor W. M. Flinders Petrie, D.C.L., LL.D., F.R.S.		Excavating in Egypt and its results.
Sir Charles Holroyd	.. ..	Michael Angelo.
Colonel David Bruce, M.D., F.R.S.		Trypanosoma as the cause of Sleeping Sickness in Uganda.
Rt. Rev. The Lord Bishop of Ripon		The Romantic Revival of Poetry.
Colonel Sinclair, R.E.	.. ..	Lessons from the Russo-Japanese War.
Sidney Lee, Litt.D.	.. ..	Shakespeare as known to his Contem- poraries.
T. Herbert Warren, M.A.	.. ..	Literature and Empire.
Rev. Henry George Woods, D.D.		The Court Portraits of Velasquez.
Hans Gadow, Ph.D., F.R.S.	.. ..	Recent Travels in Mexico.
Rev. Charles Hargrove, M.A.	.. ..	Three Weeks in Samoa.
Professor P. F. Kendall	.. ..	The Eastward Extension of the Yorkshire Coal-field.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	.. ..	Stories from Greek and Roman Coins illustrated by the Baron collection of coins.
		The Eggs and Nests of Birds, illustrated by specimens from the Crampton collection.
		Shells and their Makers, illustrated by specimens from the Wade collection.

LECTURE TO TEACHERS.

Henry Crowther	The World of Animal Life (Mammals).
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Forty-four Lectures on The World of Animal Life (Mammals).
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1905-06.

Sir William H. White, K.C.B., LL.D., F.R.S.		Modern War Ships.
Professor L. C. Miall, D.Sc., F.R.S.		Water as a Sphere of Life.
Rt. Rev. Lord Bishop of Bristol, D.D.		Some remains of the pre-English Chris- tianity of these Islands.
Mons. E. A. Martel	.. ..	Underground Explorations, with illus- trations of the chief Caves and Sub- terranean Rivers of Europe.
D. S. MacColl, M.A.	.. ..	Mediaeval Sculpture.
Beresford Pite	.. ..	The Architectural Development of Cities.
Edward A. Wilson, M.B.	.. ..	Animal Life in the Antarctic Region.
W. Warde Fowler, M.A.	.. ..	The Life and Work of Theodore Mommson.
Professor Charles E. Vaughan	.. ..	The Drama of Spain.
Dr. J. E. Eddison, President	.. ..	National Growth and National Decay.
Professor Dill, LL.D.	.. ..	Hadrian and his Times.
A. Smith Woodward, LL.D., F.R.S.		Diplodocus Carnegii and British extinct Land Reptiles.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther	The Mummy and its Associations. Life on a Coral Reef. Fish Life.
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*Lecturer.**Subject.*

LECTURE TO TEACHERS.

Henry Crowther The Wonders of the Sea and its Shore.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Forty-six Lectures on The Wonders of the Sea and its Shore.

1906-07.

Sir W. B. Richmond, K.C.B., R.A., Art in the Past.

D.C.L.

Professor W. Rhys Roberts, Litt.D., The 'Clouds' of Aristophanes.

LL.D.

Miss Gertrude Lowthian Bell .. The Earliest Churches in Asia.

Professor Grenville A. J. Cole .. Europe and Africa, a Contrast in Continental Structure.

Sir Charles Eliot, K.C.M.G., C.B. Japan.

Rev. Frederic W. Macdonald .. England and the English in the poetry of Tennyson and Kipling.

Professor W. A. Herdman, D.Sc., The Pearl-oyster Fisheries of Ceylon.

F.R.S.

Walter Ford.. .. Mediaeval German Songs and Folk Songs.

Arthur C. Benson Charles Kingsley.

E. Kitson Clark, M.A., President Leeds in the 17th Century; John Harrison—Ralph Thoresby.

Rev. W. H. Draper, M.A. .. Some Philosophers of the 17th Century.

Professor G. Baldwin Brown .. Anglo-Saxon Decoration.

SATURDAY EVENING LECTURES.

Professor P. F. Kendall Recent Earthquakes.

Professor A. J. Grant, M.A. .. Queen Elizabeth.

Professor John Goodman .. The Life History of a Piece of Steel.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther West African Insects.

Life in a Pond.

Great Monsters of the Past.

LECTURE TO TEACHERS.

Henry Crowther A Bird.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Seventy-five Lectures on A Bird.

1907-8.

Hon. R. J. Strutt, F.R.S. .. The Deep Interior of the Earth.

Thomas Stirling Lee Sculpture as Decoration on the Parthenon and other Buildings.

Alexander Hill, M.D., Master of Brains and Minds of Animals.
Downing College, Cambridge,

Mark Sykes Asiatic Turkey.

J. H. Clapham, LL.D., Professor of The Great Irish Famine.

Economics in the University of
Leeds

Colonel T. W. Harding How North America was won for the British Race.

*Lecturer.**Subject.*

J. W. Mackail, LL.D. Professor of Art and Puritanism.

Poetry in the University of Oxford

Aneurin Williams Garden City and the Improvement of Town Life.

Rev. J. G. Simpson, M.A., Principal of Leeds Clergy School. Preaching and Preachers.

M. R. James, Litt.D., Provost of King's College, Cambridge. Mediaeval Painting in England.

Carl Armbruster, with vocal illustrations by Miss Pauline Cramer. The Life and Works of Richard Wagner.

Arthur S. Way, D.Lit. The Song of Roland.

SATURDAY EVENING LECTURES.

E. Kitson Clark, M.A., President. A Chapter in the Early History of Leeds;

Professor P. F. Kendall Mountain Building.

Charles F. Archibald The Food of Wild Birds.

CURATOR'S CHRISTMAS MUSEUM LECTURES.

Henry Crowther The Horse and its Relatives.
The Art of Savage Tribes.
Variation among Animals.

LECTURE TO TEACHERS.

Henry Crowther Shells and their Makers.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-four Lectures on Shells and their Makers.

1908-9

Thomas Hodgkin, D.C.L., Litt.D. The Scottish Border, its Laws and Literature.

Major Mark Sykes Life and Campaigns of Marshal Saxe.

J. S. R. Phillips In Germany, with References to Elizabethan Actors.

Professor W. Garstang, M.A., D.Sc. The International North Sea Fishery Investigations.

J. Ellis McTaggart, Litt.D. .. Mysticism in Philosophy and Religion.

Professor P. F. Kendall, M.Sc. .. Early Man.

Edward A. Wilson, M.B. Ice.

Walter Ford Early French Song.

Professor Wm. A. Bone, D.Sc., Ph.D., F.R.S. The Explosive Combustion of Hydrocarbons.

Sydney D. Kitson, M.A. An Eighteenth Century Architect: Carr of York.

Hon. Edward Wood A Hundred Years of Democracy.

Philip Carr The History of Costume in England.

SATURDAY EVENING LECTURES.

E. Kitson Clark, President .. Gibraltar.

F. W. Moorman, Ph.D. A Day in Elizabethan London.

Rev. J. R. Wynne-Edwards, M.A. Fertilisation of Flowers.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther Life in the Shadow of the Wood.
Tradesmen's Tokens.
Charles Darwin.

LECTURE TO TEACHERS.

Henry Crowther Butterflies and Moths.

*Lecturer.**Subject.*

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-six Lectures on Butterflies and Moths.

1909-10.

Sir T. Clifford Allbutt, K.C.B., F.R.S. Bernard Palissy as a pioneer of Natural Science.
 Arthur E. Chapman, LL.D. .. General Observations on Local Government.
 Dr. F. W. Moorman The English Drama before Shakespeare.
 Professor P. F. Kendall, M.Sc. .. The Meanwood Valley, a Study in Physiography.
 Professor W. H. Bragg, F.R.S. .. Radioactivity, the new Science.
 A. E. Chapman, LL.D. .. The Parish and its Officers.
 Professor P. F. Kendall, M.Sc. .. Outdoor Demonstration on "The Physiography of Meanwood Valley."
 Dr. F. W. Moorman Shakespearean Comedy. "The Merchant of Venice."
 A. E. Shipley, M.A., D.Sc., F.R.S. Charles Darwin.
 Dr. A. E. Chapman Rural and Urban District Councils.
 Dr. F. W. Moorman Shakespearean Comedy, "As you Like It."
 Dr. F. W. Moorman Shakespeare's History Plays, "Richard II."
 Dr. Chapman The County Council.
 Sir John N. Barran, Bt., M.P. .. The Development of Domestic Furniture in the Eighteenth Century.
 Dr. Moorman Shakespearean Tragedy, "Hamlet."
 Dr. Chapman The Town Council.
 Dr. Moorman Shakespearean Tragedy. "King Lear."
 Professor D. H. MacGregor, M.A. The Poor Laws and Relief of Distress. The Measure of Poverty and Pauperism.
 M. J. Rendall, M.A. A Visit to Mount Sinai.
 Professor D. H. MacGregor, M.A. .. The Origin and Development of Poor Laws.
 F. B. Malim, M.A. Arnold of Rugby.
 Prof. MacGregor, M.A. Industrial Distress.
 Miss A. Maude Royden Shakespeare's Songs. Songs sung by Miss Pattie Hornsby.
 Prof. MacGregor, M.A. Distress of Dependents.
 Professor V. H. Blackman, M.A., Sc.D. Movements and Activities of Plants.
 Professor MacGregor, M.A. .. Charities and Voluntary Aid.
 A. C. D. Crommelin, B.A. .. Halley's Comet.
 Professor MacGregor, M.A. .. New Poor Law or No Poor Law ?

SATURDAY EVENING LECTURES.

Rev. J. G. Simpson, D.D. .. Preachers and Preaching.
 Sydney D. Kitson, M.A. .. The History of English House Building.
 Professor W. Garstang, M.A., D.Sc. The Migrations of Fishes.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther Colour in Animals and Plants.
 Fossils and the Stories they tell us.
 Nature through the Microscope.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-six Lectures on A Mineral.

<i>Lecturer.</i>	<i>Subject.</i>
1910-11.	
Rev. H. Montagu Butler, D.D.	.. William Wilberforce.
W. E. Garforth .. ..	.. The Danger of Coal Dust in Mines.
Vaughan Cornish, D.Sc. ..	.. The Panama Canal and its Makers.
Rev. J. Neville Figgis, Litt.D.	.. Samuel Johnson.
R. A. Scott Macfie, M.A., B.Sc.	.. Gypsies—their history, persecutions, character and customs.
C. E. Vaughan, M.A. ..	.. Rousseau and his Enemies (in the light of recent discoveries.)
G. H. Bryan, Sc.D., F.R.S.	.. Aviation, its development and its risks.
Walter S. Corder .. ..	.. The Making of Prints.
L. J. Rogers, M.A., Mus. Bac.	.. Some Aspects of Bach's Church Cantatas.
Rev. J. R. Wynne-Edwards, M.A., President.	The Local Distribution of English Plants.

UNIVERSITY STAFF LECTURES.

Arthur E. Chapman, M.A., LL.D...	The Evolution of our Land System. The Transition from Property to Tenure. Terms and Phrases commonly found in our Land System. Tenure in Chivalry or Knight Service. Socage, Term and Villein Tenures.
Arthur J. Grant, M.A. .. ..	.. Chapters from the History of Germany. Charlemagne and his Work. The Mediaeval Empire. The Political Consequences of the Reformation in Germany. The Thirty Years' War. The Rise of Prussia.
D. H. MacGregor, M.A. .. ..	.. Social Enquiry and Legislation. Housing. Sweating and Home Work. The Land Question. Children's Legislation. I. Children's Legislation. II. Employment and Security.

SATURDAY EVENING LECTURES.

Professor W. H. Bragg, M.A., F.R.S.	Radium.
Alfred Barran .. ..	.. Among Alpine Peaks.
J. E. Bedford .. ..	.. Impressions of Italy and the South of France.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther The Eyres-Monsell Collection of Birds from the Malay Archipelago. Spiders. The Shaping of a Sea Cliff.
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LECTURE TO TEACHERS.

Henry Crowther Bird Life.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-five Lectures on Bird Life.
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*Lecturer.**Subject.*

1911-12.

Rev. C. Hargrove, M.A. Sites and Growth of Cities.
Miss Gertrude Lowthian Bell To Baghdad through the Syrian Desert.
Rev. W. H. Frere, D.D. ..	.. Music at Adel in the Thirteenth Century.
Mrs. E. Kitson Clark ..	.. The Evolution of the Modern Illustrated Book.
J. A. Hardcastle .. ..	.. Shape and Motion of the Earth.
W. W. Watts, Sc.D., F.R.S. ..	.. Charnwood Forest and its buried Triassic Landscape.
C. H. Herford, Litt.D. ..	.. The Centenary of Browning.
F. Martin Duncan .. ..	.. The Marine Biological Association and its Work.
J. R. R. Wilson .. ..	.. Three Years in India.
A. W. Schüddekopf, M.A. ..	.. German Shakespeare Translations.

UNIVERSITY EXTENSION LECTURES.

Arthur E. Chapman, M.A., LL.D. . .	.. The Beginning and Growth of English Law. Sources of Law. Courts and the Development of Law. Influence of Roman Law on the Growth of English Law.
Albert Gilligan, B.Sc. ..	.. The Heavenly Bodies. Astronomy—Old and New. Fathoming the Depths of Space. The Sun—his family and visitors.
Rev. W. H. Draper, M.A. ..	.. Leaders in the Revival of Learning. The Age after Dante. Italian Poetry in 1321. The classical tradition. Francis Petrarch, 1304-1374. His relation to Dante. Account of his Life. Francis Petrarch, as Poet. His influence on Poetry generally. Francis Petrarch, as Humanist. His Latin works. Giovanni Boccaccio, 1313-1375. His friendship with Petrarch and influence on life and literature. The Dawn of the Renaissance in England.

SATURDAY EVENING LECTURES.

Professor A. J. Grant, M.A. ..	.. William the Silent.
Rev. J. R. Wynne-Edwards, M.A. ..	.. The Local Distribution of English Plants.
Edgar Lupton .. ..	.. Round the World with a Camera.
W. H. Perkins, M.Sc. ..	.. The Production of Intense Heat.
F. R. Dale, B.A. .. ..	.. The Great Greek Plays.
Professor A. G. Green, M.Sc. ..	.. Silks, natural and artificial.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther A Coal Dust Explosion. Animal Locomotion. Wild Nature of Roundhay Park.
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LECTURE TO TEACHERS.

Henry Crowther A Country Lane.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-four Lectures on A Country Lane.
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*Lecturer.**Subject.*

1912-13.

M. E. Sadler, Vice-Chancellor, C.B., LL.D., D.Litt.	The Influence of France and Germany on English Education.
A. G. Green, M.Sc. 	Silks, natural and artificial.
The Very Rev. The Dean of Lichfield	Northumbria after the departure of the Roman Forces.
Miss Melian Stawell 	Michael Angelo.
A. J. Grant, M.A. 	The New Birth of Germany 1807-1813.
Sir William H. White, K.C.B., F.R.S.	Unsinkable Ships.
Sir Francis Fox 	The Saving of Winchester Cathedral and other old Buildings.
Miss L. A. Lowe, M.A. 	Etruscan Civilisation.
Sir Thomas H. Holland, K.C.I.E., F.R.S.	The Systematic Study of a Great Earth- quake.
Reginald Farrer 	A Plant Collector in the Eastern Alps.

UNIVERSITY EXTENSION LECTURES.

A. W. Schüddekopf, M.A., Ph.D...	Modern Germany. Establishment and Constitution of the German Empire. Administration and Institutions. (Army, Navy, Education, Law, &c.). Commercial and Industrial Develop- ment. Political Development. Religion, Philosophy, Art and Lit- erature.
Paul Barbier, fils, M.A. 	The Influence of France on England. The Influence of French Literature on English Literature. The Influence of the French Language on the English Language. French Influences upon English Life. Present Tendencies in French Litera- ture.
Frank Rutter, B.A., Curator of City Art Gallery, Leeds.	The Evolution of Landscape Painting. Landscape Backgrounds in Italian Art. The Age of Rubens and Rembrandt. Dutch Landscape after Rembrandt. The Classic Tradition in France and England. The Romantic Spirit. Impressionism and After.

SATURDAY EVENING LECTURES.

Edgar Lupton 	The Golden West—a three months' trip to California.
Professor F. W. Moorman, B.A., Ph.D.	Our Personal Names and the Story they tell.
Charles Crowther, Ph.D., M.A. ..	Air and Earth as Food for Man.
W. Parsons 	Pot-holes of Yorkshire.
H. Hildesheim, B.A. 	The Continuity of Art.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther 	The Gambier-Bolton gift of Photographs of Animal Studies. Life among Sand-hills. Savage Art.
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*Lecturer.**Subject.*

LECTURE TO TEACHERS.

Henry Crowther In the Shadow of the Woods.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-four Lectures on In the Shadow of the Woods.

1913-14.

Professor John Garstang, D.Sc., M.A. Meroë: the City of the Ethiopians. A Story of Four Years' Excavating on the Site.

F. W. Dyson, F.R.S., LL.D. .. The Distances of the Stars.

W. G. Collingwood, M.A. .. Anglo-Saxon and Danish Yorkshire.

Professor J. H. Priestley, B.Sc., F.L.S. The Origin of Life, some theoretical Difficulties.

A. Shadwell, M.D., LL.D. .. The Principles of Singing.

Vaughan Cornish, D.Sc. .. The Size and Speed of Ocean Waves.

Lt.-Col. E. Kitson Clark, T.D., M.A. Prehistoric Yorkshire.

A. J. Sanders Leeds Pottery.

Miss A. M. Cooke, M.A. .. S. Francis of Assisi.

F. R. Dale, B.A. .. Euripides.

Rev. R. Herbert Sewell, B.A. .. The Irish Renaissance.

Dr. Reginald Farrar Plague, Pestilence, and Famine.

Lt.-Col. E. A. Hirst The Waterloo Campaign.

UNIVERSITY EXTENSION LECTURES.

Professor Arthur J. Grant, M.A. The Fall of the House of Stuart.
The Restoration Settlement and the task of Charles II.
The Ascendancy of France: the character and aims of Louis XIV.
The Secret Treaty of Dover.
The Popish Plot.
The Triumph of the Monarchy.
Character and Aims of James II.
France and England; the turn of the tide.
The Revolution.

SATURDAY MORNING LECTURES.

Professor W. Garstang, M.A., D.Sc. The Birds of Yorkshire.
Life Histories and Classification.
Birds of the Sea-shore.
Birds of Inland Waters, Moors and Fells.
Birds of the Woodlands.
The Songs of Birds.
Birds of the Meadows and Wayside.
Summary of Habits and Migrations.

SATURDAY EVENING LECTURES.

Miss D. L. Walker, M.A. .. Greek Athletics.

Professor D. H. Macgregor, M.A. Modern Jerusalem.

Frank Kidson Country Folk Songs.

Miss M. Simpson The Common Dandelion.

Francis J. Kidson Old Leeds Pottery, 1760 to 1830.

S. W. Cuttriss Travels in Northern Siberia.

*Lecturer.**Subject.*

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	Three Lectures on Wild Nature in Leeds Lanes. In East and North-East Leeds, Oulton to Roundhay. In North and North-West Leeds, Meanwood to Troydale. In West and South Leeds, Cockersdale to Robin Hood.
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LECTURE TO TEACHERS.

Henry Crowther	By Still Waters.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Sixty-seven Lectures on By Still Waters.
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1914-15.

H. A. L. Fisher, LL.D., F.B.A.	Sir Walter Scott as Historian.
J. R. Mozley, M.A.	The Poetry of Patriotism.
Henry Newbolt, D.Litt.	..	..	..	Futurism and Form in Poetry.
C. T. Whitmell, M.A., B.Sc.	..	..	..	The Moon as a View-Point.
Louis Ambler	..	..	..	Chateaux of the Loire.
C. M. Gillespie, M.A.	..	..	..	The Doctrine that Might is Right, and the idea of the Superman.
Rev. W. H. Draper, M.A., President				Utopias, Ancient and Modern.
P. F. Kendall, M.Sc.	..	..	..	Recent Discoveries on Primitive Man.
R. T. Glazebrook, C.B., D.Sc., F.R.S.				The Development of the Aeroplane.
Raymond Priestley	..	..	..	With Capt. Scott in the Antarctic.
Rev. R. H. Malden, M.A.	..	..	..	Monastic Life.

SPECIAL EVENING LECTURES.

Professor W. Garstang, M.A., D.Sc.				The Sea-Lion, Walrus, and Seal. The Manatee and Dugong. The Porpoise, Narwhal and Whale.
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SPECIAL SERIES OF LECTURES ARRANGED BY THE LORD MAYOR, MR. J. E. BEDFORD, MEMBER OF COUNCIL.

C. G. Henzell, Waterworks Engineer				Water Supply Part. I.
G. A. Hart, Sewerage Engineer	..	..	..	Sewage Disposal Part. I.
W. T. Lancashire, City Engineer				Town Planning.
Dr. W. Angus, Pro-Medical Officer				Public Health.
of Health.				

DISCUSSIONS ON "SOME OF THE PHILOSOPHICAL ASPECTS OF RELIGION."

Introduced by the Rev. Wilfrid J. Moulton, M.A., Tutor at Headingley College.				The Conception of Power in Relation to the "Will to Power."
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Followed by C. M. Gillespie, Professor of Philosophy in the University of Leeds, and the Rev. R. H. Malden, M.A., Principal of the Clergy School.

Introduced by the Rev. F. T. Woods, M.A., Vicar of Bradford.				The Church and the Nations.
Followed by the Rev. S. Bickersteth, D.D., Vicar of Leeds, and W. H. Bragg, D.Sc., Professor of Physics in the University of Leeds.				

*Lecturer.**Subject.*

SATURDAY EVENING LECTURES.

Lt.-Col. E. Kitson Clark, M.A.	..	Prehistoric Yorkshire.
Professor Moorman, B.A.	..	Broad Yorkshire.
Edgar Lupton	..	A Five-weeks' Trip in Spain and Morocco.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	..	The Leeds River.
		From the Craven Highlands—Malham to Leeds.
		The Tributaries of the Aire.
		Leeds to junction of Aire and Ouse, Airmyn, nr. Goole.

LECTURE TO TEACHERS.

Henry Crowther	..	The Farm.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	..	Sixty-four Lectures on The Farm.
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1915-16.

Rev. P. H. Wicksteed, M.A., Litt.D.	The Conversion of the Furies—a study in social evolution based on a reading of the trilogy of Aeschylus.
Alexander S. Galt	The Garden in relation to the Nation's Food.
Rev. Dr. W. H. Frere	Russian Folksong.
Professor Arthur Smithells, B.Sc., F.R.S.	High Explosives.
Professor F. W. Moorman, B.A., Ph.D.	Wordsworth and the Napoleonic War.
Professor W. H. Bragg, D.Sc., F.R.S.	The New Crystallography.
Professor Arthur J. Grant, M.A.	The Sieges of Constantinople.
Professor G. Elliott Smith, M.A., M.D., F.R.S.	The Piltown Skull.
J. E. Barton, M.A.	Fiction : good and bad.

SPECIAL SERIES OF PUBLIC LECTURES.

Miss Lynda Grier, Staff Lecturer at Newnham College, Acting Head of the Department of Economics in the University of Leeds	Six Lectures on The Economics of Nationalism.
	The Wealth of Nations.
	Conquests and Colonies.
	Trade and the Flag.
	Economic duties during the War.
	Employment during and after the War.
	Payment for the War.

SPECIAL SERIES.

C. G. Henzell, Waterworks Engineer	The Leeds Waterworks. Part II.
G. A. Hart, Sewerage Engineer	Sewage Disposal. Part II.
T. W. Hand, Public Librarian	The Leeds Public Libraries, past and present.
J. B. Hamilton, Tramways Manager	The Romance of the Leeds Tramways.

*Lecturer.**Subject.*

SATURDAY EVENING LECTURES.

F. Parton	Suburban Poultry Keeping.
W. Angus, M.D., D.P.H. .. .	Flies and Disease.
Harold W. T. Wager, D.Sc., F.R.S.	The Green Leaf and its response to Light.
Charles B. Howdill.. .. .	Serbia and its People.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	The Yorkshire Coast. Redcar to Whitby. Whitby to Filey. Filey to Spurn Point.
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SPECIAL WEDNESDAY AFTERNOON LECTURE.

Henry Crowther	The Land of the Pharaohs, its Temples and Pyramids.
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LECTURE TO TEACHERS.

Henry Crowther	British Colonies, their People and Products.
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LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Sixty-five Lectures on British Colonies, their People and Products.
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1916-17.

Lt.-Col. E. Kitson Clark, T.D., M.A.	Experiences of Service up to June, 1916.
R. S. Dower, M.A.	Some Economic lessons from the War.
Rev. E. R. Buckley, M.A.	Balzac, and his influence on the Modern Novel.
J. Dover Wilson, M.A.	Dostoyevski and the Russian Spirit.
Professor W. Garstang, M.A., D.Sc.	A Naturalist in Tunis and Algeria.
A. Perceval Graves, M.A.	War Poetry in Ireland.
Miss Helen Wodehouse	Jane Austen.
Professor L. J. Rogers, M.A., Mus.	Hymn Tunes.
Bac. Oxon.	

SATURDAY EVENING LECTURES.

Professor A. J. Grant, M.A.	Roumania.
Professor E. L. Hummel, B.Sc.	Gold Mining on the Rand.
Miss Lynda Grier	Wages, Prices and Taxes.
Councillor E. Hawkesworth	Some Geological Rambles near Leeds.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	Three English Counties. Cornwall, tin mining, coast line, legends, Cumberland, slate and iron mining, mountains, lakes. Yorkshire, coal mining, broad acres, humour.
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THE LECTURE TO TEACHERS WAS SUSPENDED THIS YEAR OWING TO RESTRICTED LIGHTING CONDITIONS.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Sixty-five Lectures on The Bird and its Flight.
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LECTURES AND RECEPTIONS GIVEN TO CONVALESCENT SOLDIERS.

<i>Lecturer.</i>	<i>Hostess</i>
Professor Walter Garstang "Flightless Birds."	Mrs. Walter Garstang
Mr. A. Gilligan "Old Leeds."	"
Dr. Dufton "Fuel."	"
Mr. Alex. Cohen } Miss K. Frise Smith } (Musical Recital).	"
Mr. H. Crowther "Flight."	"
Professor A. J. Grant "Athens."	"
Professor A. J. Grant "Constantinople."	"
Miss Greevz Fysher sang.	
Professor P. F. Kendall "Prehistoric Man."	"
Professor L. J. Rogers and Sergt.-Major Atkinson gave a Musical Recital.	
Professor W. Garstang "North Sea Plaice Fisheries."	Mrs. Greevz Fysher
Mr. A. G. Ruston "Potato Growing."	Mrs. James E. Bedford
Mr. H. Crowther exhibited a series of Lantern Slides illustrating the Flight of Birds and Aeroplanes.	
Mrs. Hopper and Mrs. Arthur Willey sang.	
Miss Hoyle gave a piano monologue.	
Professor W. Rhys Roberts "Homer's Story of Odysseus."	Mrs. F. W. Moorman
Professor W. Garstang "A Naturalist in Tunisia and Algeria."	"
The President (Rev. W. H. Draper) "An Italian Comrade, Dante."	Mrs. W. Garstang
Professor Hummel "Coal Mining in England and Gold Mining on the Rand."	Mrs. W. Garstang
Mr. H. Crowther "The Defence of Holland."	Mrs. Harold Wager
Dr. Harold Wager "String Figures."	Mrs. Henry Crowther
Miss B. L. Wager sang and Miss L. Pearce presided at the piano.	
Mr. H. Crowther "Daily Life in Pompeii."	Mrs. Greevz Fysher
Miss Greevz Fysher sang.	
Councillor Hawkesworth "Coast of Yorkshire."	Mrs. Edwin Hawkesworth
Professor W. Garstang "British Birds and their Songs."	Mrs. W. Garstang.
Mr. W. Lowson "Adulteration of Foods" (<i>Examples</i>).	Mrs. E. Hawkesworth
Professor P. F. Kendall "The Channel Tunnel."	Mrs. Walter Rowley
Dr. Dufton "Dr. Priestley and his Chemical Discoveries" (<i>Experiments</i>).	Mrs. M. E. Sadler
Mr. H. Crowther	Mrs. W. Garstang and Mrs. E. Hawkesworth.
"A Coal-dust Explosion as seen through the Microscope."	
Mr. A. Gilligan "Meteors, Meteorites and Comets."	Mrs. W. Garstang.

<i>Lecturer.</i>		<i>Hostess.</i>
Professor Jose Castillejo	Mrs. W. Garstang	
“Travels in Spain.”		
Professor P. F. Kendall	Mrs. Greevz Fysher	
“Snowfields and Glaciers.”		
Professor W. Garstang	Mrs. E. Hawkesworth.	
“Adaptive modifications among Crabs.”		
Professor W. Garstang	Mrs. W. Garstang.	
“North Sea Fisheries.”		

<i>Lecturer.</i>	<i>Subject.</i>
1917-18.	
The Vicar of Leeds, The Rev. Bernard O. F. Heywood, M.A.	Children at Home and in School.
Rev. W. H. Booth, F.R.G.S. ..	Belgium and the Ardennes.
Professor W. Garstang, M.A., D.Sc.	Animal Societies.
James Graham	Central France.
Harold Wager, D.Sc., F.R.S.,	The Movements of Plants.
Alex. Cohen, M.A.	Some Recent Violin and Piano Sonatas.
A. G. Ruston, B.A., B.Sc. ..	Food Production.
Professor J. B. Cohen, B.Sc., Ph.D.,	Chemistry and the War.
F.R.S.	
Professor P. F. Kendall, M.Sc. ..	The Rivers of the Coal Age.

SATURDAY EVENING LECTURES.

Professor A. J. Grant, M.A. ..	Three Crises in the History of the United States.
Professor F. W. Moorman, B.A.,	The Dawn of English Drama.
Ph.D.	
Rev. W. H. Cooper	Bygone Leeds, its Streets, Houses and Associations.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	Personal Impressions of Italian Cities.
	Rome, its past and present life.
	Naples, life in the shadow of a volcano.
	Venice, the City of Moving Waters.
	Florence, a City of Art and Learning

LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Sixty-five Lectures on The Home and its Contents.
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LECTURES AND RECEPTIONS GIVEN TO CONVALESCENT SOLDIERS.

<i>Lecturer.</i>	<i>Hostess.</i>
Professor A. J. Grant	Mrs. Edwin Hawkesworth.
“Joan of Arc.”	
Mr. Francis J. Kidson	Mrs. Richard Wilson.
“The Art of making Pots.”	
Professor W. Garstang	Mrs. E. Kitson Clark.
“Life in the Sea.”	
Mr. P. L. Gray	Mrs. E. Hawkesworth.
“Is Seeing Believing?”	
Mr. H. Crowther	Mrs. Greevz Fysher.
“The House and its Contents.”	

<i>Lecturer.</i>	<i>Hostess.</i>
Mr. C. Archibald	Mrs. Charles Lupton.
“Food of Wild Birds.”	
Professor W. Garstang	Mrs. R. Wilson.
“North Sea Fisheries.”	
Professor P. F. Kendall	Mrs. E. Kitson Clark.
“Early Man and Ice-Age.”	
Professor W. Garstang	Mrs. Walter Garstang.
“Co-operation and Social-life among	Animals.”
Concert, Headingley Hill Church Choir,	Mrs. James E. Bedford.
by the kindness of Mrs. Bedford.	
Mr. H. Crowther	Mrs. Greevz Fysher and
	Mrs. S. Carter.
“Wild Nature in Leeds Lanes.”	
Entertainment, by the kindness of	
Mrs. Perkin	Mrs. A. G. Perkin.
Professor W. Garstang	Mrs. E. Hawkesworth.
“Sexual reproduction in Animals and Plants.”	
Professor F. W. Moorman	Mrs. E. Kitson Clark.
“A Day in Elizabethan London.”	
Councillor E. Hawkesworth	Mrs. R. Wilson.
“The Yorkshire Coast.”	
Mr. A. Gilligan	Mrs. Greevz Fysher.
“Bygone Leeds.”	
Miss Patia Greevz Fysher sang three solos.	
Dr. William Wilson (London)	Mrs. W. Garstang.
“An Astronomical Model.”	
Professor W. Garstang	Mrs. R. Wilson.
“How the Elephant got its trunk.”	
Professor W. Garstang	Mrs. E. Kitson Clark.
“The Mechanism of Inheritance.”	
Mr. W. H. Barber	Mrs. E. Hawkesworth.
“Athens, the Ancient Greek City State.”	
The Rev. W. H. Draper	Miss C. E. Wood.
“The War of the Soul.”	
Professor W. Rhys Roberts	Mrs. Harold Wager.
“Childhood and Youth in Ancient Greece.”	
Mr. H. Crowther	Mrs. E. R. Arnold.
“The River Aire and its mysterious origin.”	
The President (Mr. J. E. Bedford)	Mrs. W. Garstang.
“Personal impressions of S. France and N. Italy.”	
Mr. Edgar Lupton	Miss Dora Lupton.
“America’s Playgrounds: Yellowstone Park and Yosemite Valley.”	
Professor E. H. Hummel	Mrs. Greevz Fysher.
“Origin of Seams of Coal and Coal Mining.”	
Professor W. Garstang	Mrs. E. Hawkesworth.
“Camouflage among Animals.”	
Mr. A. Gilligan	Mrs. Kitson Clark.
“The Sun and his Planets.”	
Professor A. J. Grant	Mrs. Richard Wilson.
“American War of Independence.”	
Professor W. Garstang	Miss C. E. Wood.
“The Making of a Fish.”	
Mr. H. Crowther	Mrs. Harold Wager.
“Some Domestic Industries of Leeds.”	
Professor Aldred F. Barker	Miss Dora Lupton.
“Sheep, Wool, Cloth.”	
Mr. R. Mackay	Mrs. E. R. Arnold.
“The Border Country.”	

*Lecturer.**Hostess.*

Miss L. Grier	Mrs. Greevz Fysher.
"Modern Problems in Olden Times."	
Miss Patia Greevz Fysher sang several solos.	
Professor W. Garstang	Mrs. W. Garstang.
"The Making of a Bird."	
Professor W. Garstang	Mrs. R. Wilson.
"Life's Struggle for Independence."	
Professor W. Garstang	Mrs. E. Hawkesworth.
"The Wanderings of some Deep-Sea Fishes."	
Professor P. F. Kendall	Mrs. W. Garstang.
"Earthquakes."	

*Lecturer.**Subject.*

1918-19.

The Rev. R. H. Malden, M.A. ..	The Making of the Modern Navy.
Theodore C. Taylor, M.P. ..	Profit-Sharing and Labour Co-partnership.
Miss L. Grier	Democracy in Industry.
S. F. Dufton, M.A., D.Sc. ..	The Scientific Work of Joseph Priestley.
Rev. W. H. Frere, D.D., with illustrations by Frank H. Fulford's String Quartette Party	Development of English Chamber Music.
Rev. Theodore E. R. Phillips, M.A., F.R.A.S.	Nova Aquilae and other 'New' Stars.
Bernard P. Scattergood, M.A.	Old Manuscripts and Records.
A. G. Perkin, F.R.S., F.R.S.E.	Some Properties of the Textile Fibres.
George Benson	Old Buildings in York.

SATURDAY EVENING LECTURES.

Edgar Lupton	America's Playgrounds: Yosemite Valley and Yellowstone Park.
Rev. W. H. Booth	Over Lebanon to Baalbeck, Damascus and Galilee.
Lt.-Col. C. Seymour Bullock ..	From Hither to Yon, a Story of Transports, or from Coracle to Steamship.
Professor W. Garstang, M.A., D.Sc.	Stories of the Creation.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	Personal Impressions of Continental Life.
	The Land of the Lingering Sun, Norway.
	A Man-made Country, West Holland.
	Where Man rules Woman, North Africa.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther	Sixty-five Lectures on Local Birds, their Eggs and Nests.
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LECTURES AND RECEPTIONS GIVEN TO CONVALESCENT SOLDIERS.

*Lecturer.**Hostess.*

Professor W. Garstang	Miss C. E. Wood.
"The Life of Birds."	

<i>Lecturer.</i>	<i>Hostess.</i>
Professor A. J. Grant	Mrs. Harold Wager.
"The French Revolution and the Reign of Terror."	
Professor W. Rhys Roberts	Miss Dora Lupton.
"Socrates, his Life, Work and Death."	
Dr. Harold Wager	Mrs. E. Kitson Clark.
"Toadstools and their Ways."	
Professor W. Garstang	Miss Dora Lupton.
"Camouflage among Animals."	
Councillor Hawkesworth	Mrs. Hawkesworth.
"West Yorkshire, its past and present Geography."	
Mr. H. Crowther	Mrs. Garstang.
"A Snowflake."	
Professor W. Garstang	Mrs. S. Denison.
"Factors in the Progress of Life."	
Professor A. J. Grant	Miss C. E. Wood.
"The League of Nations."	
Mr. Harold B. James	Mrs. J. E. Bedford.
"Readings from Dickens."	
Solos by Miss Sharp.	
Mr. R. Mackay	Mrs. H. Wager.
"In Southern Germany."	
Mr. Edgar Lupton	Miss Dora Lupton.
"China."	
Professor A. J. Grant	Mrs. W. Garstang.
"The French Republic."	
Mr. Walter L. Law	Mrs. E. Kitson Clark.
"The Making of a Piece of Woollen Cloth."	
Mr. H. Crowther	Mrs. E. Hawkesworth.
"The Tenants of a Hedgerow."	
Mr. E. C. Mulholland	Miss C. E. Wood.
"What can be done for the Discharged Disabled Men?"	
Professor A. J. Grant	Mrs. J. E. Bedford.
"The Rise of Napoleon to Power."	
Rev. W. Hargreaves Cooper	Mrs. S. Denison.
"Rural England."	
Miss Bagshawe and her friends	Mrs. Greevz Fysher.
Recital and Concert.	
Professor W. Garstang	Mrs. H. Wager.
"Social Life of Insects."	
Professor W. Garstang	Miss Dora Lupton.
"Dances and Songs of Birds."	
Mr. H. Crowther	Mrs. E. Hawkesworth.
"The Habits of some Leeds Birds."	
Professor A. J. Grant	Mrs. E. Kitson Clark.
"The End of the Reign of Terror."	
Readings from Kipling by Mrs. E. Kitson Clark.	
Dr. Eddison	Mrs. W. Garstang.
"Rabies."	
Solos by Miss Jones.	
Mr. H. Crowther	Miss C. E. Wood.
"The Romance of a Museum."	
Solos by Miss Sharp.	
Mr. H. Crowther	Mrs. J. E. Bedford.
"Coast and Mines of Cornwall."	
Mr. H. Crowther	Mrs. S. Denison.
"The History of the Society's Scheme to entertain Wounded Soldiers, at the Museum, during the War."	

*Lecturer.**Subject.*

1919-20.

A. C. Crommelin, B.A., D.Sc.	The Solar Eclipse of May 29th, 1919.
C. T. Whitmell, M.A., B.Sc.	Arthur Hugh Clough and his poem Dipsychus.
Rev. Canon Solloway, D.D.	.. Selby Abbey.
Rev. J. F. Howson, M.A.	.. Growth of a West Riding Village.
Sir John Eaglesome, K.C.M.G.	.. Nigeria.
Sydney D. Kitson, M.A., President	The Ancient Marbles in the Museum.
A. M. Woodward, M.A.	.. The Museum Inscriptions.
Councillor Edwin Hawkesworth	.. The Geological Collections of the Society.
Lt.-Col. E. Kitson Clark, T.D., M.A.	The History of the Society.

AFTERNOON LECTURES.

Professor A. J. Grant	.. .. Types of City Life.
	1. Athens.
	2. Rome.
	3. Pompeii.
	4. Florence.
	5. Venice.
	6. Mediaeval York.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	.. .. Nature Haunts in Leeds.
	1. The Romance of the Soil.
	2. The Carpet of the Earth.
	3. The Enchantment of the Water.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-five Lectures on The Life of the Plant.
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1920-21.

Professor A. Baer, D.Sc., LL.D.	The Optophone, an instrument by which the blind may read ordinary printed matter.
Pattie Hornsby, (Mrs. Arthur Chorley)	Songs of the British Isles.
W. Rhys Roberts, Litt.D., LL.D.	.. Law and Justice among the Greeks.
W. Garstang, M.A., D.Sc.	.. The Interpretation of Bird-Music.
Hugh R. Lupton, M.A.	.. Time Measurement in the Past.
A. P. Long, O.B.E.	.. Some aspects of British Forestry.
C. R. Peers, M.A.	.. The Repair of Rievaulx Abbey.
B. P. Scattergood, M.A.	.. An East India Merchant in the time of Queen Anne.
Miss Maud Sellers, Litt.D.	.. Commercial Morality in the Middle Ages.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	.. .. Jack Frost.
	When the World was Young.
	An English Country-side.

LECTURES TO SCHOOL CHILDREN.

Henry Crowther Sixty-five Lectures on Wild Life in Country Lanes.
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*Lecturer.**Subject.*

1921-22.

Sir Michael E. Sadler, K.C.S.I.,	Sandford and Merton.
C.B., M.A., Litt.D., LL.D.	
Major Gordon Home	Roman North Africa.
G. Elliot Smith, M.A., M.D., Litt.D.,	The Influence of Stereoscopic Vision in
F.R.S.	the Evolution of Man.
T. B. Partington	Changing China.
E. Heron-Allen, F.R.S.	Design and Purpose in Primitive Organ-
	isms.
Lt.-Col. E. Kitson Clark, T.D., M.A.	The Oresteia of Aeschylus in accompani-
	ment to the film of the Trilogy as acted
	at Cambridge in 1922.

CURATOR'S CHRISTMAS LECTURES.

Henry Crowther	The Romance of the Sea.
	1. The Shaping of the Coast.
	2. Life in Shallow Waters.
	3. The Dark Abyss.

CONTEMPORARY CHRONOLOGY.

Year.	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1552 1574-9	Leeds Grammar School founded. Christopher Saxton of Bramley, Leeds, made the earliest survey of England.		
1577	Of this series Augustine Ryther, native of Leeds, engraved the Yorkshire and other Maps.		
1626	Leeds received its first Charter.		
1634	St. John's Church erected.		
1643	General Fairfax drives Royalists under Sir Wm. Savile out of Leeds. Storming the town over Leeds Bridge from Hunslet and Meadow Lanes, and by Mr. Metcalf's house, Red Hall, from Woodhouse Moor.		
1645	Pestilence in Leeds; over 1,300 deaths.		
1646	Charles 1st in Leeds. Slept at Red Hall.		
1653	Leeds granted Parliamentary Representation (along with Manchester and Halifax).		
1654	Adam Baynes elected Representative. Scheme of the Leeds Clothiers for incorporating "the hole trade of brode cloth making in the Countie of York into one bodie politick." Tried but failed.		
1658	Ralph Thoresby (Historian) born in Kirkgate.		
1660	Export of English Wool prohibited in the clothiers' interest.		
1684	Cloth Market moved from Leeds Bridge to the Broad Street of Briggate. Tuesdays and Saturdays each week. Cloth being set out on temporary trestles.		

- 1699 Aire and Calder Navigation founded.
 1711 First White Cloth Hall opened in Kirkgate.
 1715 Thoresby's Ducatus Leodiensis.
 1718 *Leeds Mercury* published. Discontinued 1755.
 Published again 1767.
 1727 Trinity Church consecrated.
 1754 *Leeds Intelligencer* (now the *Yorkshire Post*) published.
 1755 Second White Cloth Hall opened in Meadow Lane.
 1756 Coloured Mixed Cloth Hall opened.
 1767 Leeds Infirmary commenced.
 1768 Leeds Library founded.
 1767-73 Dr. Priestley Minister at Mill Hill Chapel.
 1770 Leeds and Liverpool Canal began (completed 1816).
 1770-1800 Great Industrial Activity.
 1774 Joseph Priestley discovered Oxygen.
 1775 First Newcastle Philosophical Society.
 Third White Cloth Hall opened (part of which still remains).
 1781 Manchester Literary and Philosophical Society instituted.
 1782 Volunteer Corps started.
 1783 First Leeds Philosophical Society. Priestley and Hey.
 1786 Mr. Lunardi made a balloon ascent from the area of White Cloth Hall. 30,000 spectators.
 1790 (About) The modern factory system begins in the Leeds Woollen Industry.
 1791 Leeds lighted with Oil.
 1793 Death of John Wesley.
 1793 Newcastle Literary and Philosophical Society instituted.
 1797 Mr. Sheepshanks of Leeds supplied Scarlet and White Cloths to the Militia to the extent of £1,400 a year.
 1800 Royal Institution founded.
 1801-3 First Australian Wool sent to England.
 1802 First Factory Act passed.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1805 1808 1810 1812 1813 1814 1814 1815-16	Trafalgar. Electric Light (Davy). The Geological Society formed. Macadam Roads. Steam Locomotive ran industrially in Hunslet. Riot against Machines in Leeds. Steamboat plies on the Aire. National School started in Leeds. (Benjamin Gott and Son) Gotts' Bean Ing Mills opened, with 865 windows, 761 hands employed. Sir Walter Scott's "Waverley" published. Waterloo. Leeds and Liverpool Canal completed. Leeds to London by Coach in 21 hours. Whitaker's Loidis and Elmete. Bad harvests and manufacturing distress. Froebel started at Griesheim in a peasant's cottage the Universal German Educational Institute. Leeds Yeomanry was formed. A prosperous year. "Savannah" steamed across Atlantic as far as her fuel lasted. Cavalry Barracks built in Leeds. The Institution of Civil Engineers established for "the art of directing the Great Sources of Power in Nature for the use and convenience of man." Meeting at Court House to discuss promotion of a Philosophical Society in Leeds. A renewal of distress, owing to over-production of 1818.		
1816-17	Cobbett's agitation against Political Power of Landowners. Supporters of these views met at St. Peter's Fields, Manchester, were dispersed by police with casualties. Now site of Free Trade Hall.		
1818-19			
1819-20			

1819-20	Act prohibiting employment of children in mills before the age of 9. Royal Astronomical Society founded. Gas used in Leeds. Leeds Philosophical and Literary Society instituted.	John Marshall.	Dr. Hunter. C. T. Thackrah. Dr. Hunter. C. T. Thackrah.
1820-21	Owing to prevalence of riots in Lancashire, the Leeds Volunteers were formed and accompanied the Corporation to the Parish Church, October 2nd, 1820, appearing for the first time in uniform. The movement was treated with silent contempt by the <i>Leeds Mercury</i> . Leeds Guardian Society established.	John Marshall.	
1821-22	Death of Keats. Revival of Commerce and general prosperity. York Philosophical Society instituted, arising from the discovery of bones of Elephant, Hippopotamus and Rhinoceros in the Kirkdale Cave. John Marshall, of Leeds, was among the early members.	John Marshall.	Dr. Hunter. C. T. Thackrah.
1822-23	Prosperity continued in this and following years. Death of Shelley. Balloon ascents made in Leeds. Exhibitions of pictures by the Northern Society (founded 1809) in this and subsequent years in Leeds.	John Marshall.	Dr. James Williamson. Matthew Bloome.
1823-24	Grammar School re-built. Death of Byron.	John Marshall.	Dr. James Williamson. John Atkinson, Junr.
1824-25	Leeds Dispensary founded. Leeds Mechanics' Institution established. Stockton to Darlington Railway opened. Life Boat Institution founded. Brunswick Wesleyan Methodist Chapel built.	John Marshall.	Dr. James Williamson. John Atkinson, Junr.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1824-25	Joseph Aspdin, of Leeds, was granted a patent for invention of an improvement in the modes of producing an artificial stone, that is for Portland Cement. "For the last two or three years the Yorkshire men have always talked against the Australian wool, but have still bought." Letter of John MacArthur.		
1825-26	Export of English Wool permitted. Combination by workmen in Trades Unions for fixing wages made legal. Leeds Moot Hall demolished.	John Marshall.	William Osburn, Junr. Edward Saunderson George.
1826-27	H. Volta died.	Rev. W. H. Bathurst, M.A.	William Osburn, Junr. Edward Saunderson George.
1827	The Zoological Society founded. Act for Water Works in Leeds. Foundation of University College, London (under-mentioned).	Rev. W. H. Bathurst, M.A.	William Osburn, Junr. Edward Saunderson George.
1827-28	Ministry and Death of Canning.		
1828-29	Act for Gas Works in Leeds. Repeal of the Corporation Act (of 1661) by which a person was excluded from municipal office who had not received the Sacrament according to the rites of the Church of England.	Michael Thos. Sadler, M.P.	William Osburn, Junr. William West.
1829-30	Catholic Emancipation Bill; throwing open Parliament and offices to the Roman Catholics. Police introduced in London in place of old constables, by Sir Robert Peel (Bobbies). Conflagration in York Minster caused by incendiary Jonathan Martin.	Michael Thos. Sadler, M.P.	William West. Edward Baines, Junr.
1830	Manchester and Liverpool Railway opened. Cholera Epidemic.		
1830-31	The Royal Geographical Society founded.	Michael Thos. Sadler, M.P.	Robert Hall. William West.

1830-31	2nd French Revolution having immense effect on views of propertied class.	William Hey.	Robert Hall. William West.
1831-32	The power-loom first introduced for Woollens. The British Association was founded at York by Members of the York Philosophical Society. The School of Medicine was formed in Leeds. Dr. Williamson, first President. C. T. Thackrah gave a large portion of the instruction. Goethe died.		
1832-33	Michael T. Sadler introduces Bill for regulating juvenile labour in mills and factories. The Reform Bill gave two Members to Leeds, and Leeds chose for its first two representatives, Thomas Babington Macaulay and John Marshall, the first President of our Society.	William Hey.	Robert Hall. William West.
1833-34	Death of Sir Walter Scott.	James Williamson, M.D.	Robert Hall. William West.
1834-35	Abolition of Slavery. Factory Act for the protection of youthful workers. Death of Coleridge. Peel's first ministry. Formation of Leeds Literary Institution. Marsh Lane Station opened for the Leeds and Selby Railway, an omnibus running in connection from Kirkgate.	James Williamson, M.D.	Robert Hall. William West. Thomas Nunneley.
1835-36	On Jan. 1st, 1836, the close constitution of Leeds under Charter of Incorporation ceased. Griffith Wright last Mayor, George Goodman first Mayor of the Borough under the Municipal Corporation Act.	Rev. Joseph Holmes, M.D.	William West. Thomas Nunneley.
1836-37	Bishopric of Ripon established. Dickens' "Oliver Twist"—one of earliest of novels with a purpose, directed against the Poor Law System. Dissenters' Marriage Act passed. Belgrave Congregational Chapel built.	Rev. Joseph Holmes, M.D.	William West. Thomas Nunneley.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1837-38	Electric Telegraph introduced. Carlyle's "French Revolution." Dickens' "Nicholas Nickleby"—against a certain class of school in Yorkshire. Dr. Hook, Vicar of Leeds. Old St. Anne's Cathedral erected. First authentic crossing of Atlantic by steam—"Sirius."	Rev. Richard Winter Hamilton.	Thomas Nunneley. William West.
1838-39	Carlyle's "Sartor Resartus" appeared in book form. Leeds Botanic Gardens (20 acres) formed. The privilege of grinding corn, grain and malt, previously assigned to the Soke Mills, was bought up for £13,000 raised by assessment on all property in the Soke. Industrial Depression. Great Agitation for the People's Charter. "The Scrap of Paper" signed by the Great Powers (who guaranteed the immunity of Belgium). Penny Postage introduced. Midland Railway's first station (in Hunslet). Leeds Parish Church re-opened, Sept. 2nd. Chemical Society founded. Leeds Literary Institute united with the Mechanics' Institute.	Rev. Richard Winter Hamilton.	Thomas Nunneley. William Wildsmith.
1839-40		Rev. Richard Winter Hamilton.	Thomas Nunneley. Edward J. Teale.
1840-41		Adam Hunter, M.D.	Thomas Nunneley. Wm. Sykes Ward.
1841-42		Adam Hunter, M.D.	Thomas Nunneley. Wm. Sykes Ward.
1842	Peel revives income tax, dropped since 1816.	John Hope Shaw.	Thomas Nunneley. Wm. Sykes Ward.
1842-43	Prohibition of use of women and children in Collieries.	John Hope Shaw.	Wm. Sykes Ward. George Shaw.
1843-44	Year of Repeal of Corn Laws agitation.	John Hope Shaw.	Wm. Sykes Ward. George Shaw.
1844-45	And onward, Railway expansion.	Rev. Wm. Sinclair, M.A.	Wm. Sykes Ward. George Shaw.
1845-46	Thackeray's "Vanity Fair."		

1845-50	The "Domestic" Clothiers still a powerful body in the Leeds and District Woollen Industry.		
1846-47	Repeal of Corn Laws.		
1847-48	Midland Railway Station, Wellington Street. J. S. Mill's "Political Economy." The Institution of Mechanical Engineers was established "to give an impulse to inventions likely to be useful to the community at large." First Municipal Free Library opened at Warrington.	Rev. Wm. Sinclair, M.A. Rev. Wm. Sinclair, M.A.	Wm. Sykes Ward. George Shaw. Wm. Sykes Ward. George Shaw.
1848-49	End of English Chartism. Macaulay's "History of England" begins to appear. Euology of middle class rule. Mill Hill Chapel re-built (Unitarian). L. & N.W. Railway Station in Wellington Street. Leeds Improvement Act owing to visitation of cholera. £30,000 applied to substitution of sewerage system for cesspools. Sewage discharged into river until 1874.	Rev. Wm. Sinclair, M.A.	Wm. Sykes Ward. George Shaw.
1849-50	Tennyson's "In Memoriam." Religious feeling combined with respect for science. Leeds Conversation Club was instituted.	Rev. Wm. Sinclair, M.A.	Wm. Sykes Ward. George Shaw.
1850-51	First submarine electric telegraph laid, with France. Death of Wordsworth.	William West, F.R.S.	Wm. Sykes Ward. George Shaw.
1851-52	Leeds Chamber of Commerce, which had been instituted in 1785, began its continuous existence at this date. The great Exhibition in Hyde Park, London. It was hoped that this meeting of the nations of Europe in common commercial interests would ensure perpetual Peace. Louis Napoleon's coup d'état. Herbert Spencer publishes the "Development Hypothesis"—an anticipation of Darwin. Natural Science Tripos instituted at Cambridge.	William West, F.R.S.	Wm. Sykes Ward. George Shaw.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1852-53	Volunteer movement in England in face of French Danger.	Rev. Chas. Wicksteed, B.D.	Wm. Sykes Ward. George Shaw.
1853-54	Death of Duke of Wellington. Foundation stone of the Leeds Town Hall laid by John Hope Shaw on Aug. 17th. Architect, Mr. Cuthbert Brodрик.	Rev. Charles Wicksteed, B.D.	Wm. Sykes Ward. George Shaw.
1854-55	Crimean War. Ends 1856. George Baron bequeaths his collection of Coins and Books to the Society.	John Hope Shaw.	Wm. Sykes Ward. George Shaw.
1855-56	Sebastopol taken, 8th Sept., 1855. Woodhouse Moor bought by Corporation. Charlotte Brontë died.	John Hope Shaw.	Wm. Sykes Ward. George Shaw.
1856-57	Indian Mutiny begins 10th May, 1857. Leeds Church Institute established.	John Hope Shaw.	Wm. Sykes Ward. George Shaw.
1857-58	Indian Mutiny practically subdued in 1858. University of Oxford established examinations for persons not Members of the University. Woodhouse Lane United Methodist Chapel built. Leeds Town Hall opened by Queen Victoria in September.	James Garth Marshall, F.G.S.	Wm. Sykes Ward. P. O'Callaghan.
1858-59	The first Musical Festival was held. Cambridge adopted examinations in a scheme similar to that of Oxford. The British Association met in Leeds, Prof. Owen being the President. First Atlantic Cable. J. S. Mill "on Liberty."	Rev. W. F. Hook, D.D.	Wm. Sykes Ward. P. O'Callaghan.
1859 1859-60	Volunteers became a national organisation. Leeds Town Council instituted movement and the first drill of Leeds Rifles took place in September. Darwin's "Origin of Species."	Rev. Alfred Barry, M.A.	Wm. Sykes Ward. P. O'Callaghan.

1859-60	Macaulay died. Last use of the stocks in Leeds.	Rev. Alfred Barry, M.A.	Wm. Sykes Ward. P. O'Callaghan.
1860-61	The Grammar School (headmaster, Rev. Alfred Barry) was transferred from Vicar Lane to the neighbourhood of Woodhouse Moor. Yorkshire Council of Education formed. American Civil War begins April, 1861. Court House became the Post Office. Death of Richard Oastler—a Leeds citizen and leader of the ten hours' movement in factories. The Building of the Leeds Philosophical Society extended down Bond Street. Paper Duty abolished. The <i>Leeds Mercury</i> became a daily paper, price 1d. Cotton Famine.		
1861-62		Thos. Pridgin Teale, F.R.S.	Wm. Sykes Ward. P. O'Callaghan.
1862-63		Thos. Pridgin Teale, F.R.S.	Wm. Sykes Ward. P. O'Callaghan.
1863-64	Cotton Famine—causing great suffering in North of England. Thackeray died in Dec., 1863. N.E. Rly. sought to extend across Briggate, Albion Street, to N. side of Wellington Street. Plan withdrawn. Blenheim Baptist Chapel built.	Rev. Thos. Hincks, B.A.	Wm. Sykes Ward. Thomas Wilson.
1864-65		Rev. Thos. Hincks, B.A.	Wm. Sykes Ward. Thomas Wilson.
1865-66	Second Atlantic Cable laid. Formation of the Ladies' Committee of the West Riding Educational Board, becoming in 1870 Yorkshire Ladies' Council of Education. King George born. Society of Friends Meeting House built. The <i>Yorkshire Post</i> follows the example of the <i>Leeds Mercury</i> .	Rev. Thos. Hincks, B.A.	Wm. Sykes Ward. Thomas Wilson.
1866-67		Chas. Chadwick, M.D.	Wm. Sykes Ward. Thomas Wilson.
1867-68	Second Reform Act. Three members for Leeds. Norman Lockyer identified an unknown element in Solar chromosphere and called it Helium.	Chas. Chadwick, M.D.	Wm. Sykes Ward. Thomas Wilson.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1868-69	New Infirmary completed. The first in England on the Pavilion principle. Architect, Sir Gilbert Scott.	John Deakin Heaton, M.D.	Thomas Wilson. Richard Reynolds.
1869-70	Wesleyan College founded. First Free Public Library in Leeds. Commercial Buildings were pulled down and Boar Lane widened.	John Deakin Heaton, M.D.	Thomas Wilson. Richard Reynolds.
1870	Leeds New Station opened.	John Deakin Heaton, M.D.	Thomas Wilson. Richard Reynolds.
1870-71	First Free Public Library opened in Hunslet.	John Deakin Heaton, M.D.	Thomas Wilson. Richard Reynolds.
1871-72	School Boards introduced. Death of Dickens. First Horse Tram Car in Leeds. Religious tests for admission to office or to degrees at the Universities abolished. Roundhay Park bought by the Corporation. Publication of Darwin's "Descent of Man." University Extension Movement started. Voting for Parliament by ballot became law by Act of Parliament.	Rev. Canon Woodford, D.D. Rev. Canon Woodford, D.D. J. I. Ikin, F.R.C.S. J. I. Ikin, F.R.C.S.	Thomas Wilson. Richard Reynolds. Thomas Wilson. Richard Reynolds. Thomas Wilson. Richard Reynolds. Thomas Wilson. Richard Reynolds.
1872-73	Yorkshire College founded. (October, 1874).	Rev. J. H. McCheane, M.A.	Richard Reynolds. Walton Baily.
1873-74	Leeds Girls' High School opened.	Rev. J. H. McCheane, M.A.	Richard Reynolds. A. W. Rücker.
1874-75	Clergy School and Middle Class School opened.	T. Clifford Allbutt, M.D., F.R.S.	Richard Reynolds. A. W. Rücker.
1875-76	Roman Catholic Seminary opened. Bell's Telephone.		
1876-77	Great Jewish Synagogue built, Belgrave Street.		
1877-78	Woodhouse Ridge bought by the Corporation.		
1878-79	War against the Zulus (under Cetewayo) begun in January, 1879.		

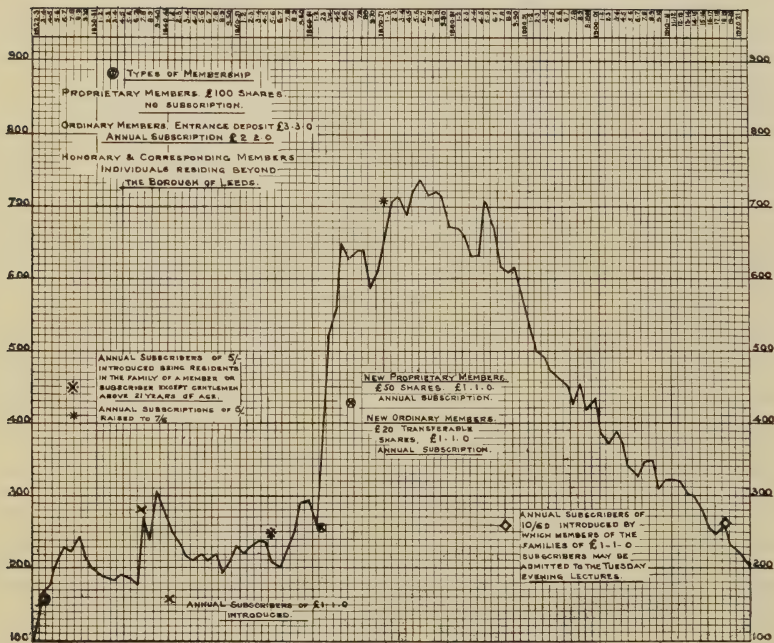
1878-79 1879-80	Hunslet Moor bought by the Corporation.		T. Clifford Allbutt, M.D., F.R.S.	Richard Reynolds. A. W. Rücker.
1880-81	First Steam Tram Car in Leeds. Electric Tramway in Paris. First War with the Boers. Death of George Eliot. Death of Carlyle and Disraeli		T. Clifford Allbutt, M.D., F.R.S.	Richard Reynolds. A. W. Rücker.
1881-82	England occupies Cairo. Assassination in Ireland of Lord Frederick Cavendish, Chairman of Yorkshire College. Death of Darwin. Gordon sent out to the Soudan.		Rev. John Gott, D.D.	Richard Reynolds. A. W. Rücker.
1882-83			Rev. John Gott, D.D.	Richard Reynolds. A. W. Rücker.
1883-84			J. E. Eddison, M.D.	Richard Reynolds. A. W. Rücker.
1884-85	Gordon assassinated in the Soudan. The Third Reform Bill, accompanied by a Redistri- bution Bill, finally passed. Leeds representation increased to Five Members of Parliament.		J. E. Eddison, M.D.	Richard Reynolds. A. W. Rücker.
1885-86	Gladstone's Home Rule Bill. Yorkshire College new buildings in College Road opened by Prince of Wales (Edward VII.) Yorkshire College joined to Victoria University.		Edward Atkinson, F.L.S.	Richard Reynolds. A. W. Rücker.
1886-87			Thomas Marshall, M.A.	Richard Reynolds. Sydney Lupton.
1887-88	Queen Victoria's Golden Jubilee.		Thomas Marshall, M.A.	Richard Reynolds. Sydney Lupton.
1888-89	Leeds Art Gallery founded.		Thomas Marshall, M.A.	Richard Reynolds. Sydney Lupton.
1889-90	Kirkstall Abbey presented to Leeds by Col. North. Thoresby Society founded.		Thos. Pridgin Teale, M.A., F.R.S.	Richard Reynolds. Sydney Lupton.
1890-91	Second Meeting of British Association in Leeds. Forth Bridge built.		Thos. Pridgin Teale, M.A., F.R.S.	Richard Reynolds. Sydney Lupton.
1891-92	Electric Tram Car service started in Leeds.		Thos. Pridgin Teale, M.A., F.R.S.	Sydney Lupton. A. Smithells.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1892-93		Rev. J. H. D. Matthews, M.A.	Sydney Lupton. A. Smithells.
1893-94		Rev. J. H. D. Matthews, M.A.	Sydney Lupton. A. Smithells.
1894-95	Discovery of Argon by Sir William Ramsay and Lord Rayleigh. Discovery of X-Rays by Rontgen. Death of Robert Louis Stevenson. Radium discovered by M. and Mme. Curie. New Post Office built in Leeds. Death of Huxley.	Rev. Charles Hangrove, M.A.	Sydney Lupton. A. Smithells.
1895-96	Leeds Court House (Post Office since 1861), pulled down. Queen Victoria's Diamond Jubilee.	Rev. Charles Hangrove, M.A.	A. Smithells. E. Kitson Clark.
1896-97	Wireless Telegraphy. Leeds made a City, and the Mayor now Lord Mayor.	Edmund Wilson, F.S.A.	A. Smithells. E. Kitson Clark.
1897-98	The restrictions on mechanically-driven vehicles were modified, the advance man with the red flag being withdrawn. Old Grammar School pulled down. Death of Gladstone.	Edmund Wilson, F.S.A.	A. Smithells. E. Kitson Clark.
1898-99	Boer War. Leeds Rifles sent a detachment to South Africa. First wireless Press message sent, from Wimereux to the S. Foreland. The Turbine Motor invented by the Hon. C. A. Parsons, coming into use. Major Ross, lecturer to the Society, announces that Malaria is transmitted by Mosquitoes. Ruskin Hall, the first residential college for artisans, founded at Oxford.	Nathan Bodington, M.A., Litt.D.	A. Smithells. E. Kitson Clark.
1899-1900		Nathan Bodington, M.A., Litt.D.	A. Smithells. E. Kitson Clark.

1900-1	Death of Ruskin. Public opening of new buildings of the Textile Industries Dept. of the Yorkshire College. Queen Victoria died.	J. H. Wicksteed, Pres. of Instit. M.E.	A. Smithells. E. Kitson Clark.
1901-2	First Submarines ordered for the British Navy. Leeds New Roman Catholic Cathedral built.	J. H. Wicksteed, Vice-Pres. of Instit. M.E. Arthur Smithells, B.Sc., F.R.S.	A. Smithells. E. Kitson Clark. E. Kitson Clark. J. B. Cohen.
1902-3	Death of Cecil Rhodes. Peace signed at Pretoria, May 31st. Workers' Educational Association founded. Wright Bros. fly 260 yards (1903)	Arthur Smithells, B.Sc., F.R.S.	E. Kitson Clark. J. B. Cohen.
1903-4	Ramsay and Soddy proved that Radium continuously emits Helium.		E. Kitson Clark. J. B. Cohen.
1904-5	Yorkshire College became Leeds University. Entente Cordiale established with France.	J. E. Eddison, M.D.	E. Kitson Clark. J. B. Cohen.
1905-6	Wright Brothers make a record fly of 24 miles at a speed of 38 miles an hour.	J. E. Eddison, M.D.	E. Kitson Clark. J. B. Cohen.
1906-7	First Dreadnought launched. The Transvaal accorded self-government. Amundson, Scott, Wilson, and Oates reached the South Pole. Wilson had lectured to the Society, Oates came from Meanwood.	E. Kitson Clark, M.A., F.S.A., M.Inst.C.E.	E. Kitson Clark. J. B. Cohen. E. Kitson Clark. P. F. Kendall.
1907-8	Militant Suffragette Campaign opened.	E. Kitson Clark, M.A., F.S.A., M.Inst.C.E.	E. Kitson Clark. P. F. Kendall.
1908-9	Bleriot flies the Channel (1909).	E. Kitson Clark, M.A., F.S.A., M.Inst.C.E.	E. Kitson Clark. P. F. Kendall.
1909-10	Peary reached the North Pole (1909). Taxicabs came in.	Rev. J. R. Wynne-Edwards, M.A.	E. Kitson Clark. P. F. Kendall.
1910-11	Death of Swinburne and Meredith. King Edward died (1910).	Rev. J. R. Wynne-Edwards, M.A.	E. Kitson Clark. P. F. Kendall.
1911-12		C. T. Whitmell, M.A., B.Sc., F.R.A.S.	E. Kitson Clark. P. F. Kendall.
1912-13		P. F. Kendall, M.Sc., F.G.S.	E. Kitson Clark. P. F. Kendall.

<i>Year.</i>	<i>Noteworthy Events.</i>	<i>Presidents of Philosophical Society.</i>	<i>Secretaries of Philosophical Society.</i>
1913-14	European War.	P. F. Kendall, M.Sc., F.G.S.	E. Kitson Clark. W. Garstang.
1914-15	Leeds Territorials proceeded to the Front.	Rev. W. H. Draper, M.A.	E. Kitson Clark. W. Garstang.
1915-16	Panama Canal opened.	Rev. W. H. Draper, M.A.	E. Kitson Clark. W. Garstang.
1916-17	First night air raid on London.	Rev. W. H. Draper, M.A.	E. Kitson Clark. W. Garstang.
1917-18		James E. Bedford, F.G.S.	E. Kitson Clark. W. Garstang.
1918-19	End of European War. Women's Franchise Bill passed.	James E. Bedford, F.G.S.	E. Kitson Clark. W. Garstang.
1919-20	First crossing of the Atlantic by Aeroplane. First women took her seat as Member of Parliament. Women were candidates for the Leeds City Council but did not succeed.	Sydney D. Kitson, M.A., F.S.A., F.R.I.B.A.	E. Kitson Clark. W. Garstang.
	Optophone invented by E. Fournier D'Albe and developed by Barr and Stroud, late Professors of Leeds University.		
1920-21	Leeds Philosophical Society property transferred to Leeds City Corporation under certain terms.	Sydney D. Kitson, M.A., F.S.A.,	E. Kitson Clark. W. Garstang.

— MEMBERSHIP — 1822-3 TO 1921-2 —



CHAPTER VIII.

CONCLUDING NOTE.

THE CURVE OF MEMBERSHIP is a register of the prosperity of the Society, and a fair though not complete index to its periods of special activity.

The introduction of new classes of members from time to time has an immediate influence on this curve, and this extension of the constituency has been due rather to local causes than to the events of general chronology, though these too may be found worthy of attention in this connection.

The upward movement was checked in 1828 when the Society lost by death the invaluable services of Mr. John Atkinson, Curator, Librarian and Founder of the Museum, and in 1830 when Mr. E. Sanderson George, Hon. Curator of the Museum, died.

By this time general lecturing had begun to be a recognised source of income, and there was competition outside the Society. The Council of the period pointed out that by the time the Society had been in existence for 10 years, all those who were likely to be interested would have been recruited, and some of these had passed away. Furthermore the Society appeared to suffer owing to the special attractions of the more popularly constituted Leeds Mechanics' Institute founded in 1825.

The Annual Subscriber was introduced in 1836. At the same time there was a general movement of intellectual activity in Leeds. Dr. Hook became Vicar of Leeds in 1837, while Dr. Hamilton, President from 1837-40, was a man of great force of character, versatile learning, and notable eloquence. The fasciculus of Transactions was printed and attracted attention among the learned outside Leeds. Lectures on painting and music were introduced. The work remained on the high level which had accompanied the advance in membership but the number of Members began to decline, therefore the Council devoted its serious attention to an analysis of the financial position, and decided to canvass for members and recruit from a younger generation.

The donations to the Museum were most valuable during this period. A *Conversazione* was held in 1846, a dinner in 1847, a promenade in 1850. The general result was that the fall of

numbers was checked and the functions of the Society enlarged by attaching to them a social interest. This was notably apparent in the great expansion of the Society after 1856.

The long discussions on a possible union between the Society and the Leeds Library lasted from 1854 to 1857, but proved of no avail. Relieved from the paralysis of constant fruitless meetings on this subject, the Society devoted itself to its own development. New classes of members were added, new buildings were projected and completed in 1861. By Dr. O'Callaghan's influence the lectures from distinguished savants outside Leeds were largely increased, and the Society was the centre of the intellectual social life of Leeds at the time that the town itself was making great progress. The Town Hall was opened by the Queen in 1858. The British Association met there. The Musical Festival was inaugurated.

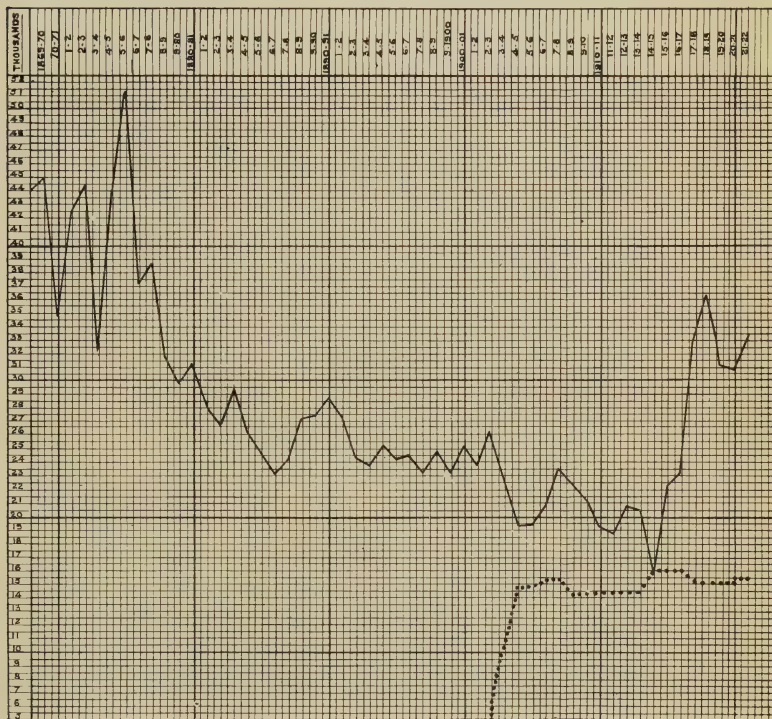
The sudden fall in the chart in 1866-8—for which there is no apparent reason—was followed by a rapid rise. A devoted and able President, Dr. Heaton, the dinner on the 50th Anniversary, 1870, were causes contributing to the production of the second summit on the diagram. After that date a descent began from which there has been no permanent recovery. The community interested in the Society was transferring itself to the more distant suburbs. Technical journals, general magazines, assisted by the cheapness of paper and the improved technique of illustration, were taking the place of lectures.

Except for a noteworthy re-action in 1883-5, when our constant friend and cultivated Member, Dr. Eddison, was President, the gradient from 1870-1 is unhappily consistent. In spite of splendid additions to the collections, able contributors to the Lecture Series, faithful and competent service on the lines designed by the promoters, events seem to shew that the functions of the Society should be in some respects modified, and the intellectual energy was diverted gradually but naturally towards the Yorkshire College of Science, founded in 1874.

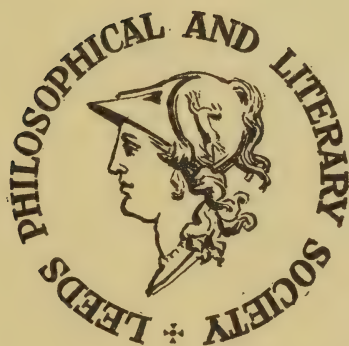
Events indicative of the change in the residential geography of Leeds were the necessary increase in artisans' dwellings, the transformation of house property by the widening of Boar Lane, the introduction of the large buildings of the New Station, 1870, and the institution of horse trams in 1871, steam cars in 1880, electric cars in 1891.

— VISITORS TO THE MUSEUM 1869-70 TO 1921-2 —

SCHOOL CHILDREN " " " 1902-3 TO 1918-19 (DOTTED LINE)



The Seal of the Leeds Philosophical and Literary Society Ltd., the device being adopted from a gem which was used for endorsing the first certificates of membership and later for sealing the special envelopes of the Original Society.



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